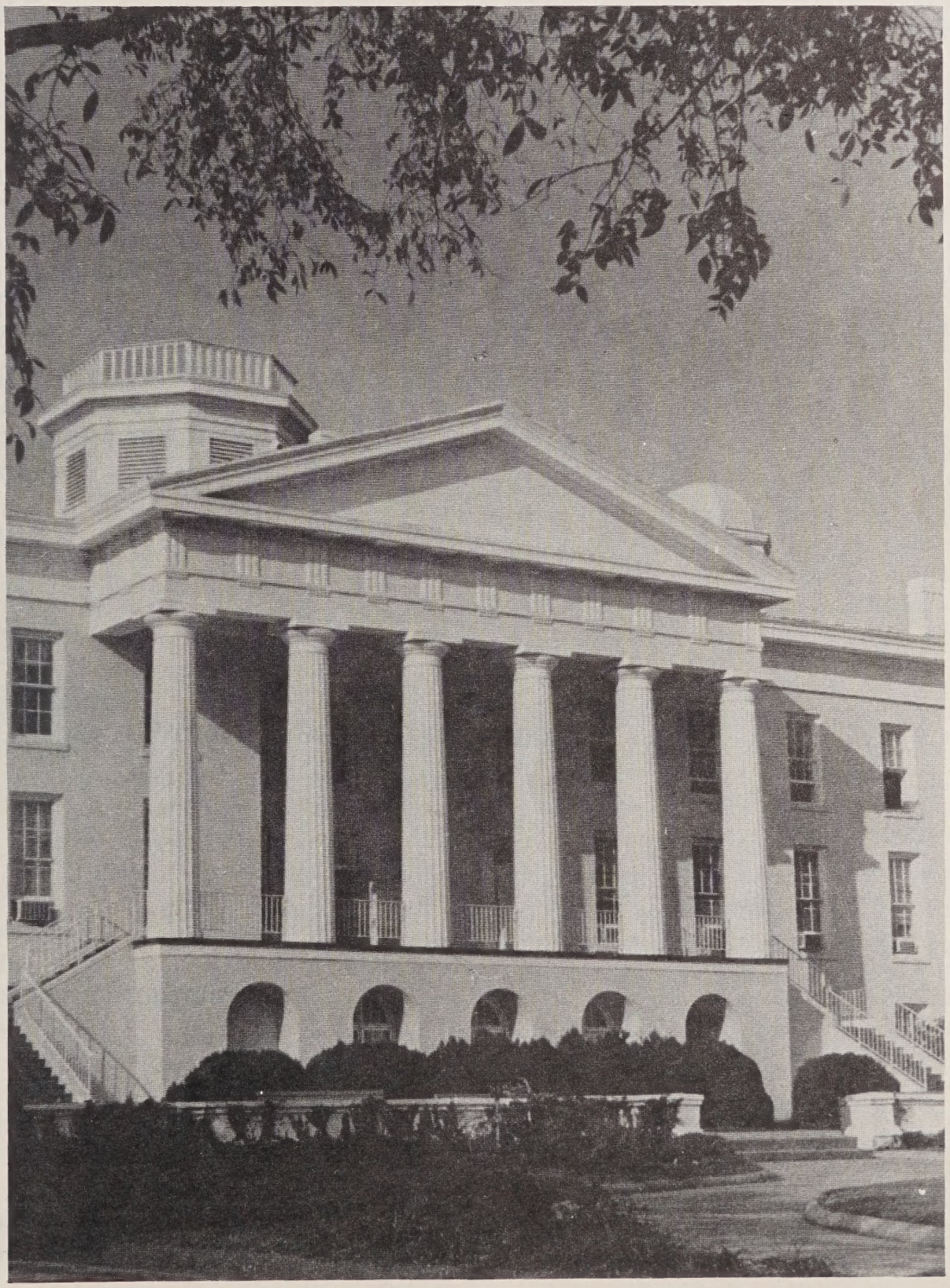
MITCHELL COMMUNITY COLLEGE



PART II

GENERAL CATALOG

1979 – 80

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GENERAL ADULT EDUCATION

CONTINUING EDUCATION

Mitchell Community College strives to provide academic and occupational programs consistent with the educational needs of Iredell and surrounding counties. The college provides opportunities for people to further meet their educational goals by offering programs which enable people to pursue occupational, vocational, cultural, and civic interests.

The college strives to serve the needs of the adult community by providing numerous programs of continuing education. Adult programs are held on a continuing basis and are developed according to the community's needs and interests. Courses include formal academic learning, cultural advancement, vocational and technical improvement, and personal enrichment. Any individual who is eighteen years of age or older or is a high school graduate may be admitted to these classes.

CLASS LOCATIONS

Classes are held on campus and at various other locations throughout Iredell County. Some of the locations are South Iredell High School, Iredell Department of Correction, Mooresville, and various industries throughout the county. An extension center is located at the Woods Elementary School in Mooresville.

ATTENDANCE

Most classes are scheduled on a quarterly basis. Special workshops and industrial courses are scheduled whenever necessary. Brochures are available each quarter to provide class schedules. Announcements will be made through local news media, including radio stations and the local newspaper. Classes usually meet one to three hours each night. Regular attendance should be maintained. For courses offering certificates, eighty per cent attendance is required.

FEES AND SUPPLIES

A registration fee of $5.00 is charged for adult classes and is due at the beginning of the course. Students enrolled in courses for Adult Basic Education, Volunteer Fire Departments, local law enforcement, the Department of Correction, and persons 65 years of age or older are exempt from the registration fee. Books are available at the college bookstore or from the instructor when the class meets. The cost of supplies varies according to individual courses.

CONTINUING EDUCATION UNIT

Continuing Education Units are awarded to all classes with the exception of Adult Basic Education, High School Diploma programs, and craft classes. A Continuing Education Unit is defined as "ten contact hours of participation in an organized continuing education experience under responsible sponsorship, capable direction, and qualified instruction." These units provide a means of recording and accounting for non-credit courses, programs, and activities.

ADULT BASIC EDUCATION

These classes are designed to assist adults in the fundamentals of English, math, reading, science, and social studies. Classes are set up in various locations throughout the county. The classes are held two nights a week and all materials are provided. In addition to small group instruction, the opportunity for assistance on a one-to-one basis exists and programmed materials are used as appropriate. These materials are written on different levels allowing for individual needs to be met. Upon completion of basic education, the student may enroll in the Adult High School program. An effort is made to offer classes each quarter in these areas: South Iredell, Mooresville, Statesville, and the Department of Correction.

ADULT HIGH SCHOOL DIPLOMA PROGRAM

Adults who have less than a twelfth grade education are given the opportunity to complete high school. Adults eighteen years of age or over may enroll. Anyone between the ages of sixteen and eighteen years of age must have written permission from the school superintendent.

Standardized tests are given for those eighteen years or over. The scores must meet standards set by the State Board of Education. The courses of study required for all students are English, science, social studies, and math. An individual may take the tests prior to enrollment. If satisfactory scores are made on

each test, the individual is recommended for the Adult High School Diploma, which is awarded by the Mooresville or Statesville City Schools depending upon the address of the individual. Otherwise students must enroll in the required courses and retake the test at the end of the quarter. The adult courses are scheduled each quarter in various locations throughout Iredell County. Textbooks are available which the students purchase for their own use. Assignments are made by the instructors. The courses meet two nights a week for eleven weeks. Brochures of the scheduled classes in Iredell County are available at the Continuing Education Office.

G.E.D. HIGH SCHOOL EQUIVALENCY

Under this program, individuals may take a series of tests called the General Education Development Tests. A person's knowledge and skills are tested in five areas: literature, mathematics, natural science, English, and social studies. The Equivalency Certificate is issued by the North Carolina State Board of Education and is mailed to the recipient. The certificate is recognized as the equivalent of a high school diploma by industry, agencies of government, employers, colleges, and other organizations.

The following requirements must be met before taking the G.E.D. test:

1. Residence: A legal resident of North Carolina.
2. Minimum Age: 18
   If one is between the ages of 16 and 18 and displays a special need he may be allowed to take the GED test by filing a special form, which is available from the GED Examiner of the Continuing Education Office. This form requires a notarized parental permission to take the test, as well as the permission of the Superintendent of Schools.
3. Cost: None

DIRECT STUDIES LAB

The lab enables adults to complete courses for the adult high school diploma program during the day. A laboratory co-ordinator is available from 8:00 a.m. until 10:00 p.m. Monday through Thursday and 8:00 a.m. until 5:00 p.m. on Friday. There are no regularly scheduled classes. The student can enroll and study in the lab at a time convenient to his work schedule. The age requirements are the same as those for evening classes. Materials are provided for the students and guidance is given by the co-ordinators. Programmed materials allow the student to work at his own rate of speed in many subjects.

Students may strengthen educational abilities, make up course deficiencies, upgrade knowledge related to employment, or study for personal satisfaction. Subject areas which can be studied are foreign languages, reading skills, business education, science, mathematics, health, social studies, English and chemistry.

CONTINUING EDUCATION COURSE DESCRIPTIONS

Courses listed here are offered throughout the year. Additional courses are scheduled according to need and interest. The suggestions from students and from the community are used in planning and expanding the schedule of courses to be offered. The abbreviation CEU means Continuing Education Units. One unit is equivalent to ten hours of instruction.

HUMANITIES

This classification of continuing education encompasses the area of learning which includes literature, philosophy, history, and the fine arts in the form and style that is favored by the local population.

ART A-301

ART-2001 ACRYLICS I – 33 hrs. 3.3 CEU's

This is a course for those who have not painted in acrylics before. It is to teach simply how to handle the media, how to mix colors, and how to begin to paint.

ART-2001 ACRYLICS II – 33 hrs. 3.3 CEU's

Acrylics II is a course designed for advanced students who have done acrylic painting, but would like to experiment in learning to use different techniques.

ART-2003 BEAD CRAFT – 22 hrs. 2.2 CEU's

This course is designed to introduce students to the art of making jewelry from pearls and beads. Several methods are used to make jewelry, including crocheting, cross needle and single needle.

ART-2003 CANDLE CRAFT – 22 hrs. 2.2 CEU's

The art of making candles, which includes the melting and pouring of candles as well as the decoration of many different types is covered by this class.

ART-2003 COPPER ENAMELING – 22 hrs. 2.2 CEU's

Enameling is a process of sifting a coat of enamel on metal and firing it in a kiln for two to three minutes. Students learn to make trays, bowls,and earrings with a variety of finishes.

ART-2003 NEEDLECRAFT – 33 hrs. 3.3 CEU's

Needlecraft is a course which teaches the basic aspects of knitting, crocheting, and crewel embroidery. Introduction will cover basic stitches and gradual progression in all phases.

ART-2003 NEEDLEPOINT – 33 hrs. 3.3 CEU's

Instructions are given for sixteen needlepoint stitches. There will be a study of the material to be used. At the end of the course, the students will make something of their choice.

ART-2003 FURNITURE REFINISHING – 44 hrs. 4.4 CEU's

Instruction in this course will train adults in the best procedures of refinishing furniture. Students will learn to strip furniture, prepare the wood, and apply the finishes.

ART-2004 APPALACHIAN SQUARE DANCING – 22 hrs. 2.2 CEU's

Instruction is given in the basic calls and movements of Appalachian Square Dancing.

ART-2004 WESTERN SQUARE DANCING – 22 hrs. 2.2 CEU's

Instruction is given in the basic calls and movements of Western Square Dancing.

ART-2005 DECOUPAGE – 44 hrs. 4.4 CEU's

Students of these classes develop skills in applying decorative paper cutouts to bottles, boxes, boards, etc., to produce unique and interesting items for decorative display.

ART-2006 DRAWING – 33 hrs. 3.3 CEU's

The fundamentals of design, composition and perspective will be the central theme of this course. The beginning or advanced student may work with pencil, ink or charcoal as the media to develop a skill in sketching or drawing.

ART-208 GUITAR – 33 hrs. 3.3 CEU's

This course is designed to help students gain a basic understanding of and skill in playing the guitar. Students will learn notes and chords on the guitar and will be able to play a number of songs.

ART-2011 BASIC & ADVANCED PHOTOGRAPHY – 33 hrs. 3.3 CEU's

These courses will include basic introductions to photography and nomenclature of equipment, types of cameras and their uses, basic film types and their uses, what to photograph and why, how to show what you need in a court of law, and an introduction to photography in court and review.

ART-2015 SKETCHING – 22 hrs. 2.2 CEU's

This course is designed to introduce students to various creative techniques of sketching. Class work involves both lecture and sketching exercises.

ART-2019 CERAMICS I – 33 hrs. 3.3 CEU's

Ceramics I is designed as an introduction to the art of ceramics. Students will be involved in pouring molds, using glazes, painting, and firing.

ART-2019 CERAMICS II – 33 hrs. 3.3 CEU's

Ceramics II is a follow-up course designed to meet the needs of the experienced students. These students will be involved with the use of more advanced procedures, stains, and molds.

RELIGION A-302

REL-2001 BIBLE STUDY – 33 hrs. 3.3 CEU's

This is a general Bible study in which topics such as how the English Bible came into being will be covered. Biblical themes such as grace, love, salvation and judgement will also be studied.

MATH A-501

MAT-2007 MODERN MATH – 33 hrs. 3.3 CEU's

This course is designed as an introductory or refresher course in modern math. Some topics that will be covered are introduction to numbers, place values, number bases other than 10, sets, and word problems.

ANTHROPOLOGY A-701

ANT-2003 ARCHAEOLOGY – 33 hrs. 3.3 CEU's

This course was designed for people interested in collecting Indian artifacts, and in knowing what they have found. Some topics to be covered are history of N.C. Indians, artifacts and classification, site surveys, recording and procedures of excavation.

ECONOMICS A-702

ECO-2006 MONEY AND BANKING – 45 hrs. 4.5 CEU's

Money and Banking is a basic course in banking principles. Topics to be covered range from functions of banking services to operations.

HISTORY A-704

HIS-2004 LOCAL HISTORY – 33 hrs. 3.3 CEU's

This course is designed to teach students how to research local historical documents.

TECHNICAL EXTENSION

Extension courses in this classification are designed to equip students with the practical, industrial knowledge of a specific nature which will increase the students' technical skill.

PHYSICS: ELECTRICAL & ELECTRONICS OPTIONS S-501

ELN-3004 RADIO AND T.V. REPAIR – 66 hrs. 6.6 CEU's

This course will consist of 50 hours of study in basic electricity, 10 hours on safety methods, 22 hours on the use of test equipment, 15 hours on understanding and using schematics and diagrams, 20 hours for discussion of components, 15 hours on understanding radio and T.V. signals, and 30 hours on the use and operation of Solid State.

VOCATIONAL EXTENSION

This classification of extension courses is provided to aid students in the development of new skills, or the upgrading of existing skills, which are in demand among employees. Students are expected to develop a special degree of fitness in these classes when they apply themselves in the prescribed manner through the complete schedule of learning experiences prepared by the instructor.

ORNAMENTAL HORTICULTURE W-117

AGR-3301 BASIC HORTICULTURE – 33 hrs. 3.3 CEU's

This course deals with horticulture principles and the application of plant science fundamentals to horticulture practices.

AGR-3304 BONSAI – 33 hrs. 3.3 CEU's

Bonsai is a course designed to teach the art of dwarfing and shaping trees and shrub for arrangements.

ADVERTISING W-220

DMK-3105 FCC LICENSE COURSE – 66 hrs. 6.6 CEU's

This class will prepare a student to take the written examination for the Commercial Radio-Telephone 1st Class Operator Licenses. The class will cover such topics as Basic Law, Basic Operating Practice, Basic Radio-Telephone and Advanced Radio-Telephone.

HOSPITALITY W-210

HOS-3001 BASIC QUANTITY COOKING – 60 hrs. 6.0 CEU's

This course deals with principles of interpreting menus, menu terms, recipes, measurements and other data relative to the cooking profession.

HOS-3010 FOOD SERVICE SELLING – 120 hrs. 12.0 CEU's

This course is designed to teach the basics of good food service selling. Some topics to be covered are the waiter and waitress, types of table service and settings, sidework, initiating the service, serving the meal, wine, and bar service.

HOS-3024 OVERVIEW OF SCHOOL FOOD SERVICE – 60 hrs. 6.0 CEU's

A basic orientation course presenting the history of school feeding, characteristics of a good program, personnel and human relations, nutrition, sanitation and safety.

HOS-3032 PROCUREMENT IN SCHOOL FOOD SERVICE – 60 hrs. 6.0 CEU's

This course is designed for directors of school food service. It covers such items as organization, menu planning, marketing expertise, nutrition and evaluation.

REAL ESTATE W-227

DMK-3502 REAL ESTATE – 33 hrs. 3.3 CEU's

This course will cover the many facts of the real estate business. Topics to be covered are sales, promotions, contracts, legal aspects, as well as other relevant subjects.

HEALTH AND SAFETY

AMBULANCE ATTENDANT W-330

EMT-3028 EMERGENCY MEDICAL TECHNICIAN – 81 hrs. 8.1 CEU's

This class is designed for ambulance attendants and any others who are interested. Classes of this nature are necessary for people who deal with emergency situations. Seventy-one hours are spent in class and ten hours are spent working in an emergency room.

NURSES AIDE W-337

NUR-3018 LAMAZE – 24 hrs. 2.4 CEU's

Lamaze is a course designed for prospective parents who are interested in natural childbirth.

NUR-3023 NURSES ASSISTANT – 50 hrs. 5.0 CEU's

This course is designed in such a manner that after its completion students will be able to qualify for hospital positions as nurses aides.

HOME ECONOMICS

CLOTHING AND TEXTILES W-541

HEC-3103 SEWING I – 33 hrs. 3.3 CEU's

This course offers the basic techniques in clothing construction such as taking measurements, finding the correct figure type, choosing the pattern, buying materials on the market today, altering patterns, preparing and constructing garments.

HEC-3104 SEWING II – 33 hrs. 3.3 CEU's

This sewing class is the second in a series of courses to train women in correct sewing techniques.

HEC-3101 SEWING III – 33 hrs. 3.3 CEU's

Sewing III is designed as a general sewing class which deals with the basic techniques of tailoring, which includes establishing firmness of shape and precision in fit in a tailored garment.

HEC-3106 TAILORING – 33 hrs. 3.3 CEU's

Tailoring is the construction of detailed clothes such as suits, coats, dresses and formals.

HEC-3114 SEWING WITH KNITS – 33 hrs. 3.3 CEU's

Instruction for sewing knit fabrics includes measuring a pattern, cutting out garments, construction of garments and matching stripes. Suggestions will be given on construction of women's slacks, and construction of men's slacks.

HEC-3105 CROCHETING – 22 hrs. 2.2 CEU's

In this course the student learns the different stitches and their abbreviations, how to read a pattern and how to regulate stitches. They also learn to increase and decrease stitches where needed.

HEC-3109 KNITTING – 22 hrs. 2.2 CEU's

This course is designed to increase one's knowledge of stitches and procedures used in hand knitting. Abbreviations, symbols, terms, and types of yarn used in knitting are also discussed.

FOOD PREPARATION W-542

HEC-3203 CAKE DECORATING I – 22 hrs. 2.2 CEU's

This class deals with the basic techniques of beginning cake decorating. Emphasis is placed on learning a variety of flowers, a few simple borders, and proper assembly of a cake. The last night of class groups of 4-6 students assemble a two-tier wedding cake.

HEC-3203 CAKE DECORATING II – 22 hrs. 2.2 CEU's

Cake Decorating II is a continuation of basic cake decorating. Skills covered include more elaborate borders, the use of meringue icing, more flowers, and the construction of a three tier wedding cake by each student.

INTERIOR DESIGN AND DECORATING W-545

HEC-3304 FLOWER ARRANGING – 33 hrs. 3.3 CEU's

Flower arranging is the study and practice of art forms and principles of flower arranging. It includes the use of flowers, containers, accessories and arrangements for special occasions.

HEC-3305 INTERIOR DESIGN – 33 hrs. 3.3 CEU's

The aim of this class is to inform persons in the art of decorating houses or apartments. A study is made of house plans, carpeting, draperies and accessories. Suggestions are given for the selection of items to give a room or house a new look.

OFFICE

ACCOUNTING/BOOKKEEPING W-750

BUS-3002 BOOKKEEPING – 44 hrs. 4.4 CEU's

This course is for the person who has had no previous experience in bookkeeping. Instruction will cover the proper method of keeping records, including journalizing, posting, trial balance, and statements.

GENERAL CLERICAL W-753

BUS-3204 HOSPITAL WARD CLERK – 44 hrs. 4.4 CEU's

This class teaches medical terms and correct procedures of doing the paper work that a ward secretary comes in contact with. After the completion of this course one can qualify for work as a ward secretary.

SECRETARIAL AND RELATED W-754

BUS-3403 BASIC SHORTHAND – 44 hrs. 4.4 CEU's

This is a course in fundamental procedures and basic instruction for shorthand outlines. Instruction will be given on all outlines used in shorthand.

BUS-3404 SHORTHAND II – 44 hrs. 4.4 CEU's

This class is designed for students who have mastered the fundamentals of shorthand and who are interested in gaining speed in writing and transcribing.

TYPING AND RELATED W-758

BUS-3502 TYPING I – 44 hrs. 4.4 CEU's

Typing I is an introduction to the touch typewriting system. Instruction will emphasize correct typing techniques, mastery of the keyboard, simple business correspondence, tabulation, and manuscripts.

BUS-3503 TYPING II – 44 hrs. 4.4 CEU's

This class will place emphasis on speed and accuracy with further mastery of correct typewriting techniques.

PERSONAL IMPROVEMENT W-762

BUS-3603 PARENT EFFECTIVENESS TRAINING – 24 hrs. 2.4 CEU's

Parents are given training in forms of verbal communication that are designed in helping their children overcome their personal problems. They are also given skill training in specific methods of preventing conflicts between themselves and their children. Parents are taught the hazards and harmful effects of using the "win-lose" method of conflict resolution.

TRADES AND INDUSTRY

AIR CONDITIONING W-970

AHR-3001 REFRIGERATION AND AIR CONDITIONING – 66 hrs. 6.6 CEU's

This course is a study of the operation of refrigerators and air conditioners, which will enable an individual to make repairs. Basic electrical principles and mechanical difficulties are emphasized.

BLUEPRINT READING W-972

BPR-3001 BLUEPRINT READING – 33 hrs. 3.3 CEU's

Students in this course will be introduced to the principles of interpreting blueprints and trade specifications that are common to the building trades.

ELECTRICAL CONSTRUCTION W-984

ELC-3002 RESIDENTIAL WIRING – 33 hrs. 3.3 CEU's

This course is designed to teach the fundamental practices of residential, commercial, and industrial wiring.

MASONRY W-975

MAS-3001 BRICKLAYING – 66 hrs. 6.6 CEU's

This will be an introductory course to the art and skill of bricklaying. Topics to be covered include laying straight walls, fireplaces, lattice work, and corners.

METALWORKING W-980

WLD-3003 BASIC WELDING – 33 hrs. 3.3 CEU's

This course is designed as an introduction to the art of welding. Students take a brief look at all methods of welding without too much emphasis on any one type.

WLD-3004 ARC WELDING – 33 hrs. 3.3 CEU's

This course is the study of the arc welding process, welding machines and accessories, types of metals and identification, and additional information related to the welding process.

SMALL ENGINE REPAIR AND SERVICES W-986

AUT-3501 SMALL ENGINE REPAIR – 33 hrs. 3.3 CEU's

A practical course in the repair of small air-cooled gasoline engines such as those found on lawn mowers, tillers, or minibikes.

WOODWORKING OCCUPATIONS W-988

WWK-3005 WOODWORKING I – 33 hrs. 3.3 CEU's

This course is designed to help the woodworking enthusiast in the use, care, and safe practice of basic hand and power tools.

WWK-3004 WOODCARVING – 33 hrs. 3.3 CEU's

This course is designed to teach the techniques of woodcarving. Students learn the correct tools to use, and the types of wood to use for whittling and for good carving.

MANAGEMENT DEVELOPMENT PROGRAMS

Courses offered in this program are designed to exert personal qualities of leadership and supervisory competencies. The purpose of each course is to offer practical applications to present needs of the company.

Certificates are awarded when a person satisfactorily completes the course and attends 80% of the class meetings. Upon completion of 160 hours a diploma is awarded. Some of the courses which are available are listed below.

MANAGEMENT DEVELOPMENT PROGRAM W-979

MDP-28 hrs. PRE–SUPERVISORY TRAINING (PST) 2.8 CEU's

Pre-Supervisory Training is designed to prepare employees who are being considered for supervisory positions for the level of work which they will be expected to perform. Some topics covered are personnel relations, organizations, and job responsibility.

MDP-44-46 hrs. PRINCIPLES OF SUPERVISION 4.4-4.6 CEU's

This course is designed to deal with the basic and general principles of effective supervision techniques. The course is broken down into seven distinct parts. Some of these include fundamentals of supervision, communications, how to train employees and job evaluation.

MDP-10 hrs. JOB RELATIONS 1.0 CEU's

The Job Relations course is concerned with the fundamentals of human relations. Some areas of study in this class will be the fundamentals of human relations, bases for decision making and taking preventive action.

MDP-18-20 hrs. HUMAN RELATIONS 1.8-2.0 CEU's

This course emphasizes the development of the science of Humanics. Topics to be covered will include machines and the human element, the personal needs that stimulate behavior, leadership supervision, and techniques for handling people.

MDP-22 hrs. ART OF MOTIVATING PEOPLE 2.2 CEU's

This course is designed to motivate employees in relation to production. Emphasis will be placed on specific problems in the area of motivation.

MDP-22 hrs. ECONOMICS IN BUSINESS AND INDUSTRY 2.2 CEU's

This course is designed to give supervisors a better understanding of the American Free Enterprise System and how it operates. Included in this course are the five basic principles of capitalism, the function of government and its responsibility to the people.

MDP-22 hrs. EFFECTIVE COMMUNICATIONS 2.2 CEU's

This course places emphasis on clear and forceful oral, written, and implied communication. It gives supervisors an opportunity to improve their effectiveness in day-to-day communications with employees.

MDP-22 hrs. EFFECTIVE WRITING 2.2 CEU's

Effective writing is designed to help foremen and supervisors improve their writing skills in reports, letters and memoranda which are necessary in daily operations.

MDP-15 hrs. EFFECTIVE SPEAKING 1.5 CEU's

Emphasis in this course is placed on the theory and practice of the art of self expression. A guide is provided for the supervisor to follow in helping him overcome fear and self-consciousness when addressing a group.

MDP-20 hrs. SPEED READING 2.0 CEU's

This course is designed to broaden the span of perception and recognition, and to increase the speed and comprehension in reading for those in business and industry.

MDP-10 hrs. JOB METHODS 1.0 CEU's

This course is set up in five two hour sessions. Emphasis is placed on the importance of finding more efficient ways of completing tasks. Each participant is given a chance to study and submit a proposed method improvement project.

MDP-15 hrs. INSTRUCTOR TRAINING 1.5 CEU's

This course is designed to provide the future supervisor-instructor with an approved method of instruction based on the basic principles of learning, which will enable him to teach others the related technology or manipulative skills of his trade.

MDP-22 hrs. INDUSTRIAL SAFETY AND ACCIDENT PREVENTION 2.2 CEU's

This course provides the supervisor with a systematic approach to a better understanding of safety and accident prevention problems. Special emphasis is given to preventive safety measures and understanding the causes of accidents and injuries.

MDP-10 hrs. INDUSTRIAL FIRST AID 1.0 CEU's

The aim of this course is to give the basics of first aid techniques to supervisors who will be confronted with injuries from accidents likely to occur in the work area. Also covered is factual information for the temporary treatment of sudden illnesses, attacks, and seizures on the job.

MDP-40 hrs. SUPERVISION IN HOSPITALS 4.0 CEU's

This is a training course similar to MDP-1, which has been developed specifically for hospital supervisors. This course covers supervisory areas of human relations, leadership, job methods, housekeeping, and training subordinates.

MDP-10-12 hrs. LABOR LAWS 1.0-1.2 CEU's

This is an introductory course for supervisors to introduce them to the important labor laws so that they may know the legal responsibilities of supervisors and what legal protection is available to business and its employees.

MDP-12 hrs. EMPLOYEE EVALUATION AND INTERVIEWING 1.2 CEU's

This course provides fundamental information and basic guides for setting up and using a sound employee evaluation program in relation to what is expected of the supervisor.

MDP-12 hrs. JOB INSTRUCTION TRAINING 1.2 CEU's

This course covers such points as how to get thorough analysis of the job to be taught, how to develop skills in the art of teaching, an understanding of the individual as a learner, and an appreciation of the employee's part in the organization.

NEW AND EXPANDING INDUSTRIES

New and Expanding Industry Training is primarily concerned with the development and administration of programs designed for the purpose of training new employees. This institution, in cooperation with the Industrial Services Division of the State Department of Community Colleges, will design and administer a special program for training the production manpower required by any new or expanding industry creating new job opportunities.

FIRE SERVICE TRAINING

Area fire schools are held to train personnel about techniques and use of new equipment. Classes are held at the municipal and volunteer departments. Other courses are planned upon request. Fire service classes include the following:

FIREMANSHIP W-982

FIP-42 hrs. INTRODUCTION TO FIREFIGHTING 4.2 CEU's

This course is designed for use where firemen must be trained for service as quickly as possible and for departments that have been active not more than two years, and have had no formal training. Topics can be arranged according to the needs established by the fire chief and instructor.

FIP-9 hrs. FORCIBLE ENTRY .9 CEU's

Forcible entry means the opening of or the breaking through an enclosure that cannot be opened by conventional means. This course includes breaking a lock, prying open a door or window, and opening floors and roofs.

FIP-6 hrs. ROPE PRACTICES .6 CEU's

Rope work involves the teaching of all the knots and hitches necessary for hoisting tools, ladders, hoses, extinguishers, and for the splicing, care and storage of lifelines and handlines.

FIP-9 hrs. PORTABLE FIRE EXTINGUISHERS .9 CEU's

This course is designed to discuss techniques in the proper selection, use and operation of extinguishers to safeguard life and property. It also trains one to be able to select, use and recommend fire extinguishers that are properly suited for the condition that may exist.

FIP-9 hrs. LADDER PRACTICES .9 CEU's

Emphasis in this course is placed on team work and smooth continuous movements which are essential to develop speed and avoid injury. The course incorporates ladder information and practices in type, design and construction, methods and techniques of handling ladders and inspection and care of ladders.

FIP-9 hrs. SALVAGE AND OVERHAUL PRACTICES .9 CEU's

This course is designed to present approved techniques in the use and care of salvage equipment used to reduce property damage during any emergency. Overhaul practices cover approved techniques of operation and procedures by which these conditions can be handled.

FIP-12 hrs. FIRE STREAM PRACTICES 1.2 CEU's

This course covers information on the efficient service of pumps, hoses, and nozzles. Also covered are specific fire stream requirements and methods of calculating fire streams.

FIP-12 hrs. FIRE APPARATUS PRACTICES 1.2 CEU's

This course deals with the proper care and operating practices of motorized fire apparatus. Some topics included are fire apparatus, requirements, special mechanical features and functional equipment (pumpers and aerial ladders), and caring for fire apparatus.

FIP-9 hrs. VENTILATION .9 CEU's

This course is designed to aid one's understanding of what happens inside a building when it fills with smoke from a smouldering fire, and what is to happen if the condition is handled properly.

FIP-12 hrs. RESCUE PRACTICES 1.2 CEU's

Rescue work is an important function of the fire service. This guide will describe good practices in the careful removal of people from hazards due to fire, explosions, storms, earthquakes, and any other occurance that seriously disrupts normal conditions.

FIP-9 hrs. PROTECTIVE BREATHING EQUIPMENT .9 CEU's

The purpose of this course is to increase one's knowledge of the operation of protective breathing equipment, and the correct method of wearing it.

FIP-12 hrs. FIRE FIGHTING PROCEDURES 1.2 CEU's

This outline discusses ways and means of applying a plan to a course of action, and to provide a system by which firefighting procedures may be selected, applied, and improved upon to meet the needs of a local situation.

FIP-no minimum FIRE BRIGADE TRAINING FOR INDUSTRY no minimum CEU's

In order to avoid major industrial plant fire losses each plant should maintain a well-trained fire brigade. Each brigade should be ready to meet the needs of the plant which it serves. These brigades do not replace the fire departments but they can and do play a big part in the initial steps taken to prevent costly fires.

FIRST AID

The following is a list of the courses taught in first aid. Upon completion of any one of these courses you are qualified for Red Cross Certification.

Multi-Media First Aid	12 hrs.
Standard First Aid	18 hrs.
Advanced First Aid	52 hrs.
CPR	9-12 hrs.

These courses and others are also designed to meet the Occupational Safety and Health Act requirements.

LAW ENFORCEMENT TRAINING

In order to upgrade law enforcement personnel, courses are planned to meet local needs. Riot Control, Police Firearms, Supervision for Law Enforcement, and Pursuit Driving have been taught. Courses are planned in cooperation with the policemen, state highway patrol, and sheriff's office. We also offer a Police Recruit School under the Minimum Standards Act of North Carolina.

COURSE DESCRIPTIONS

Following the course name and number appears a numerical code which should be interpreted as follows: first number indicates the number of credit hours; the second number indicates the number of lecture hours; the third number indicates the number of laboratory hours; and the fourth number indicates the number of shop practice hours.

AGRICULTURAL SCIENCE

AGR 100 AGRICULTURAL ORIENTATION 1 (0-2-0)

This course is designed to orient the student with Mitchell Community College and the entire Agriculture curriculum.

AGR 102 PLANT SCIENCE 5 (5-0-0)

An introductory general botany and crop science course covering the fundamental principles of the reproduction, growth, functions, and development of seed bearing plants with application to certain commercially important plants in North Carolina.

AGR 103 GENERAL HORTICULTURE 4 (3-2-0)

A course dealing with horticulture principles and the application of plant science fundamentals to horticultural practices.

AGR 104 ANIMAL SCIENCE 5 (5-0-0)

An introductory animal science course covering the fundamental principles of livestock production. A study of the animal body and the basic principles of reproduction, genetics growth, fattening, digestion, along with the selection, feeding, improvement, processing and marketing of livestock.

AGR 105 AGRICULTURE RECORDS AND ACCOUNTS 4 (3-2-0)

This course is designed to assist the students' understanding of the basic principles involved in keeping financial records to meet the needs of a successful farm or agribusiness. The course will deal with specific topics such as: single entry accounting, tax regulations, and principles of double entry accounting. The student will also be involved in developing a record system that can be adopted to present financial information needed to make business decisions and file tax returns for the typical farm or small agribusiness.

AGR 106 FIELD CROPS 4 (3-2-0)

A general survey course dealing with the major field crops grown in North Carolina. Special emphasis will be given to tobacco technology, pastures and forage crops and weeds and their control.

AGR 107 AGRICULTURAL MACHINERY 5 (3-4-0)

This course is designed as a study of implements used in the production of crops from seedbed preparation to harvest. The course includes selection, operations, maintenance, adjustment and performance, as well as the economics of owning and operating the equipment. The tractor is studied in terms of its relationship to the implements to include power requirements, adaptability, functional maintenance, proper hitching and power transmissions.

AGR 108 SOIL MANAGEMENT 3 (2-2-0)

This course will take a close look at those fundamental soil physical and chemical properties which most affect soil and crop management decisions. This course serves as an introduction to soil fertility.

AGR 109 SOIL SCIENCE AND FERTILIZER 4 (3-2-0)

A course dealing with basic principles of efficient classification, evaluation, and management of soils; care, cultivation, and fertilization of the soil, and conservation of soil fertility.

AGR 110 FARM BUSINESS MANAGEMENT 5 (5-0-0)

A review of the functions of the manager of a business firm and the problems he faces. Development of the concept of planning by both partial and complete budgeting. Review of the concepts of costs and the length of run in production. Practice in preparing enterprise budgets as an aid in choosing what to produce. Use of partial budgeting to fund the least cost production data to select the level of production that yields the most net revenue. Relationship between size, efficiency and income of a farm. Review of procedures for evaluating the efficiency of the manager.

AGR 120 FARM WELDING I 3 (1-4-0)

Techniques of oxyacetylene and arc welding and cutting of mild steel. Class and shop instruction will concentrate on practices commonly used on the farm in repair and maintenance jobs.

AGR 121 FARM WELDING II 3 (1-4-0)

Continuation of AGR 120. Welding procedures of metals other than mild steel will be covered as requested by students.

AGR 122 SMALL GASOLINE ENGINES 4 (3-2-0)

Class and shop instruction on the maintenance and overhaul of the two and four-cycle gasoline engines. Enrollees will be taught to diagnose engine problems and how to isolate and replace defective parts.

AGR 123 FARM TRACTOR MECHANICS I 4 (3-2-0)

A study of the construction, operation, and maintenance of farm gasoline and diesel tractors. Component systems to be covered include engines, electrical, fuel, power train, and auxiliary attachments.

AGR 124 FARM TRACTOR MECHANICS II 4 (3-2-0)

Continuation of AGR 123.

AGR 125 FARM CONSTRUCTION I 6 (2-8-0)

Class and shop instruction on the techniques and practices of construction projects commonly encountered on farms. Units to be included in the course are carpentry, masonry, concrete, water and plumbing systems, and other construction projects.

AGR 126 FARM CONSTRUCTION II 6 (2-8-0)

Continuation of AGR 125.

AGR 127 FARM CONSTRUCTION III 6 (2-8-0)

Continuation of AGR 126.

AGR 201 AGRICULTURAL CHEMICALS 4 (3-2-0)

A study of farm chemical pesticides, their ingredients, formulation, and farm application, with emphasis on the effective and safe use of chemicals in agricultural pest control.

AGR 202 PLANT IDENTIFICATION AND USE 5 (3-4-0)

This course is designed as a study of identification, adaption, and use of ornamental trees, shrubs, vines and herbaceous plants and their use.

AGR 203 AGRICULTURE MATHEMATICS 5 (5-0-0)

An introductory math course designed to better acquaint the agricultural student with day to day mathematical operations.

AGR 204 GENERAL POULTRY SCIENCE 4 (3-3-0)

An introduction to the science of poultry production. The major phases of the study include the history of the poultry industry; the anatomy and physiology of the chicken; the breeds and varieties; the breeding principles; the principles of incubation, brooding, rearing, feeding, housing, management; marketing poultry products; and the science of disease and parasite prevention and control.

AGR 205 WOODWORKING 6 (2-8-0)

This course is a continuation of the Farm Construction series.

AGR 206 PLUMBING 4 (3-2-0)

This course is designed as an introduction to the fundamentals of plumbing. A large portion of class time will be spent in the lab working on day to day problems the typical farmer will have to deal with.

AGR 207 AGRICULTURAL CHEMICALS II 4 (3-2-0)

This is a continuation of AGR 201. A more indepth look will be taken at chemical formulation and its effects upon the plant. Residual effects upon the environment will also receive a major portion of the class time.

AGR 208 LIVESTOCK DISEASES & PARASITES 4 (3-2-0)

A course dealing with the common diseases and parasites of livestock; sanitation practices and procedures with emphasis on the cause, damage, symptoms, prevention; and treatment of parasites and diseases, and management factors relating to disease and parasite prevention and control.

AGR 210 FARM ELECTRIFICATION I 3 (1-4-0)

A study of the basic principles and systems, their application to agricultural production with emphasis on equipment for controlling the utilization of electricity.

AGR 211 FARM ELECTRIFICATION II 3 (1-4-0)

Continuation of AGR 210.

AGR 212 DAIRY AND BEEF PRODUCTION 5 (5-0-0)

A study of the principles of selection, breeding, feeding, care and management of dairy and beef cattle.

AGR 213 FORAGE CROP PRODUCTION 5 (3-4-0)

This course will take a close look at the many plant species used for pastures, hay and silage will be related to the production of livestock. Production practices will be studied for the major classes of these plants, such as cool weather or hot weather annuals of perennials.

AGR 216 ANIMAL NUTRITION 4 (3-2-0)

A course dealing with the principles of nutrition and their application to feeding practices of cattle, horses, sheep and swine production in North Carolina.

AGR 217 SOIL FERTILITY 3 (3-0-0)

This course is designed as a study of the factors which influence soil productivity with emphasis upon fertilizer materials. The impact of technological advances upon fertilizer production, formulation, and application, including liquid and suspension fertilizers and bulk-blend materials will be covered. Time sources and the influence on soil acidity upon soil fertility and plant growth will be discussed. Soil testing techniques, interpretation of soil tests and the addition of nutrients (major, secondary and micronutrients or trace elements) to correct or prevent deficiencies as an integral part of soil management programs will be presented.

AGR 220 AGRICULTURE MARKETING AND SALES 4 (4-0-0)

This course will include the study of what markets are supposed to do, how markets change over time, problems in coordinating agriculture productions and marketing, problems and opportunities in the organization and operation of farm supplying products for the consumer and farm supplying products for use by other agricultural business. The principles of salesmanship and selling techniques will also be covered.

AGR 221 AGRIBUSINESS AWARENESS 2 (1-2-0)

This course is designed to give the student a better look at the daily activity in the agribusiness world. A large portion of the class time will be spent visiting various agribusinesses throughout geographic area.

AIR CONDITIONING AND REFRIGERATION

AHR 1001 PRINCIPLES OF REFRIGERATION 7 (3-0-12)

This is an introduction to the principles of refrigeration. Fundamental to the course will be terminology, the use and care of tools and equipment, and the identification and function of component parts of a system. Other topics to be included will be the basic laws of refrigeration, characteristics and comparison of the various refrigerants, with the use and construction of valves, fittings, and basic controls. Practical work includes tube bending, flaring and soldering. Standard procedures and safety measures are stressed in the use of special refrigeration service equipment and the handling of refrigerants. Prerequisite: none.

AHR 1002 DOMESTIC AND COMMERCIAL REFRIGERATION 7 (3-0-12)

The course will involve domestic refrigeration servicing of conventional, hermetic, and absorption systems. Cabinet care, controls, and system maintenance in domestic refrigerators, freezers, and window air conditioning units are stressed. Commercial refrigeration servicing of display cabinets, walk-in cooler and freezer units, and mobile refrigeration systems are studied. The use of manufacturing catalogs in sizing and matching system components and a study of controls, refrigerants, and servicing methods are made. The course also involves the use and care of test instruments and equipment used in servicing electrical apparatus for air conditioning, refrigeration and heating installations. Electrical principles, trouble-shooting, transformers, motors, starting devices, switches, electrical heating devices and wiring are also presented. Prerequisite: AHR 1001 or instructor approval.

AHR 1003 ESSENTIALS OF AIR CONDITIONING 7 (3-0-12)

The course includes the selection of various heating, cooling and ventilating systems, investigation and control of factors affecting air cleaning, movement temperature, and humidity. Use is made of psychrometric charts in determining needs to produce optimum temperature and humidity control. Commercial air conditioning equipment will be assembled, welded and tested. Prerequisite: AHR 1001 or instructor approval.

AHR 1004 AIR CONDITIONING AND REFRIGERATION SERVICING 7 (3-0-12)

The course includes installation, maintenance, and servicing of equipment used in the cleaning, changing, humidification and temperature control in air conditioned spaces. Installation of various ducts and lines, burner operation, controls, testing, adjusting, and trouble shooting are also emphasized. Prerequisite: AHR 1001 or instructor approval.

AHR 1101 AUTOMOTIVE AIR CONDITIONING 2 (1-0-3)

General introduction to the principles of refrigeration; study of the assembly of the components and connections necessary in the mechanisms, the methods of operation, and control; proper handling of refrigerants in charging the system. Use of testing equipment in diagnosing trouble, conducting efficiency tests and general maintenance work. Prerequisite: PHY 1101.

AHR 1121 PRINCIPLES OF REFRIGERATION 7 (3-0-12)

An introduction to the principles of refrigeration, terminology, the use and care of tools and equipment, and the identification and the function of the component parts of a system. Other topics to be included will be the basic laws of refrigeration; characteristics and construction of valves, fittings, and basic control. Practical work includes tube bending, flaring and soldering. Standard procedures and safety measures are stressed in the use of special refrigeration service equipment and the handling of refrigerants. Prerequisite: none.

AHR 1122 DOMESTIC AND COMMERCIAL REFRIGERATION 9 (5-0-12)

Domestic refrigeration servicing of conventional, hermetic, and absorption systems. Cabinet care, controls, and system maintenance in domestic refrigerators, freezers, and window air conditioning units are stressed. Commercial refrigeration servicing of display cabinets, walk-in cooler and freezer units, and mobile refrigeration systems are studied. The use of manufacturer's catalogs in sizing and matching system components and a study of control refrigerants, servicing methods is made. The American Standard Safety Code for Refrigeration is studied and its principles practiced. Prerequisite: AHR 1121.

AHR 1123 PRINCIPLES OF AIR CONDITIONING 7 (3-0-12)

Work includes the selection of various heating, cooling, and ventilating systems, investigation and control of factors affecting air cleaning, movement, temperature, and humidity. Use is made of psychrometric charts in determining needs to produce optimum temperature and humidity control. Commercial air conditioning equipment is assembled and tested. Practical sizing and balancing of ductwork is performed as needed. Prerequisite: AHR 1122.

AHR 1124 AIR CONDITIONING AND REFRIGERATION SERVICING 5 (3-0-6)

Emphasis is placed on the installation, maintenance, and servicing of equipment used in the cleaning, changing, humidification and temperature control of air in an air conditioned space. Practical application of the installation of ducts and lines needed to connect various components is provided. Lab work involves burner operation, controls, testing and adjusting of air conditioning and refrigeration equipment, and location and correction of equipment failure. Prerequisite: AHR 1123.

AHR 1126 ALL YEAR COMFORT SYSTEMS 5 (3-0-6)

Auxiliary equipment used in conjunction with refrigeration systems to provide both heating and cooling for "all year" comfort will be studied and set up in the laboratory. Included will be oil fired systems, gas fired systems, water circulating systems, and electric-resistance systems. Installation of heat pumps will be studied along with servicing techniques. Reversing valves, special types of thermostatic expansion valves, systems of de-icing coils, and electric wiring and controls are included in the study. Prerequisites: AHR 1123, AHR 1128.

AHR 1128 AUTOMATIC CONTROLS 5 (3-0-6)

Types of automatic controls and their function in air conditioning systems will be studied. Included in the course will be electric and pneumatic controls for domestic and commercial cooling and heating; zone controls, unit heaters and ventilator controls, commercial fan systems controls, commercial refrigeration controls, and radiant panel controls. Prerequisites: ELC 1102, AHR 1122.

ANTHROPOLOGY

ANT 251 PHYSICAL AND CULTURAL ANTHROPOLOGY 5 (5-0-0)

The factors which make for variation in living things are examined along with a thorough study of genetics. The origin of man is traced in detail as much as existing fossil finds will permit. The course covers about a two million year span of time.

ART

ART 150 DESIGN I 3 (0-6-0)

Upon completion of this course, the student will be able to identify and use the principles and elements of design as they relate to the two-dimensional surface. Flat pattern development, pictorial composition, depiction of special illusion, and value analysis will have been studied.

ART 151 GENERAL DRAWING I 3 (0-6-0)

Upon completion of this course, the student should be able to identify problems and possible graphic solutions of representing visual experience on the two-dimensional surface. The student will have explored a variety of material including pencil, pen, and ink, conte, and charcoal and will have employed various techniques with an emphasis upon utilizing these materials and techniques as a means of personal expression.

ART 152 GENERAL DRAWING II 3 (0-6-0)

Upon completion of this course, the student will have been introduced to the study of perspective and other systemized methods of rendering the illusion of form and space. The student will be able to apply elements of good pictorial composition and will have continued to develop technical competence in the use of a variety of material and techniques.

ART 153 GENERAL DRAWING III 3 (0-6-0)

Upon completion of this course, the student will be able to analyze the graphic media as a personal expression and will have continued to develop technical competency.

ART 154 WOODCUT 3 (0-6-0)

Upon completion of this course the student should be able to select woods, execute appropriate designs for woodcut, handle woodcut tools properly, and produce editions of prints using various woodcut techniques.

ART 155 SERIGRAPHY 3 (0-6-0)

Students will demonstrate an understanding of silk screening as a fine art by designing and producing editions of prints which use various techniques such as tusche and glue, crayon and glue and paper stencils.

ART 156 CRAFTS 3 (0-6-0)

Upon completion of this course, the student should be able to: (1) identify and describe major textile craft forms, (2) design, construct, and exhibit textile craft projects. Crafts will include stitchery, macrame, hand-weaving, tie-dyeing and batik.

ART 157 CERAMICS I 3 (0-6-0)

Upon completion of this course, the student should be able to: (1) design and produce ceramic projects by the pinch pot, coil, slab, and potter's wheel methods, (2) weigh, mix, and apply glaze formulas to ceramic projects.

ART 158 CERAMICS II 3 (0-6-0)

Upon completion of this course, the student should be able to: (1) design and produce ceramic projects building on the foundation of skills acquired in Ceramics I, (2) construct one major sculpture project which will combine at least one additional material with the clay, (3) keep an individual test tile record of glaze experiments.

ART 159 CERAMICS III 3 (0-6-0)

Upon completion of this course, the student should be able to: (1) design and produce ceramic projects building on the foundation of skills acquired in Ceramics I and II, (2) formulate a base glaze with variations, (3) describe how to load, fire, and unload a gas and an electric kiln.

ART 160 JEWELRY I 3 (0-6-0)

Upon completion of this course, the student should be able to: (1) design and produce finished metal jewelry projects, (2) demonstrate a knowledge of and proper care for jewelry tools and equipment, (3) demonstrate the ability to saw, file, forge, solder, cast, and finish a variety of metals.

ART 161 JEWELRY II 3 (0-6-0)

Upon completion of this course, the student should be able to: (1) design and produce finished jewelry projects building on basic skills acquired in Jewelry I, (2) demonstrate a knowledge of and proper care for jewelry tools and equipment including centrifugal casting equipment. Prerequisite: ART 158.

ART 162 JEWELRY III 3 (0-6-0)

Upon completion of this course, the student should be able to: (1) design and produce finished jewelry projects building on the basic skills acquired in Jewelry I and II, (2) demonstrate a knowledge of and proper care for jewelry tools and equipment. Emphasis will be on the relationship of material, function, and individual approach of the student. Prerequisite: ART 159.

ART 163 BASIC PHOTOGRAPHY 3 (0-6-0)

The student will be introduced to the Basics of Photography, including use of the camera, composition, exposure and dark room techniques.

ART 164 INTERMEDIATE PHOTOGRAPHY 3 (0-6-0)

This is a continuation of ART 155 with the introduction of more advanced camera and dark room techniques.

ART 165 ADVANCED PHOTOGRAPHY 3 (0-6-0)

The student will experience Advanced Darkroom Techniques in Film and Print Processing. Specialized instruction in specific areas and regular critiques of Photography provided. Prerequisite: ART 156.

ART 180 ART APPRECIATION 5 (5-0-0)

A survey of ideas and stylistic trends from cave painting to modern times. Painting sculpture and architecture of each major period will be discussed. The course is designed to meet state requirements for public school teachers and is open to the general college student.

ART 181 INTRODUCTION TO ART I 5 (5-0-0)

Through the use of lectures, discussions, field trips, readings, and audio-visual materials, the student will analyze, recognize, and understand general terms, media and methods used in the various visual arts with special emphasis on painting, sculpture, and architecture.

ART 182 INTRODUCTION TO ART II 5 (5-0-0)

Through the use of lectures, discussions, field trips, readings, and audio-visual materials, the student will recognize and understand general terms used in contemporary art. The student will demonstrate an understanding of media and methods used in the two and three-dimensional arts through projects and examinations.

ART 256 PAINTING I 3 (0-6-0)

Upon completion of this course, the student will be able to select tools and materials for painting and will be able to demonstrate a knowledge of the elements of art and the principles of design as they apply to the production of painting.

ART 257 PAINTING II 3 (0-6-0)

The student will continue the analysis and production of good pictorial composition and will continue experimentation in a variety of painting media.

ART 258 PAINTING III 3 (0-6-0)

The student will give special attention to painting as a means of personal expression and will continue to identify and solve the problems of pictorial production such as color, form, and special illusion. The student will continue technical experimentation.

ART 259 SCULPTURE I 3 (0-6-0)

In this course the student will experiment with a variety of materials and methods of sculpture. The student will construct and use piece molds to reproduce their clay originals.

ART 260 SCULPTURE II 3 (0-6-0)

The student will continue to experiment with a variety of materials and methods of sculpture. There will be an emphasis on carving in wood and stone.

ART 261 SCULPTURE III 3 (0-6-0)

Upon completion of this course, the student will have (1) expanded knowledge of basic sculpture, (2) performed individual investigation and work in modeling, casting, carving, and construction, (3) experimented with recently developed media in sculpture.

ART 280 ANCIENT ART HISTORY 5 (5-0-0)

An in-depth study of the evolution of art with specific emphasis on the art of Ancient Egypt and Ancient Greece. Painting, sculpture and architecture are discussed. Open to general college student.

ART 281 RENAISSANCE ART HISTORY 5 (5-0-0)

An in-depth study of the evolution of 15th and 16th Century art with emphasis on the art from Giette to Michaelangelo. Painting, sculpture, and architecture are discussed.

ART 282 MODERN ART HISTORY 5 (5-0-0)

An in-depth study of the evolution of Modern Art with emphasis on the period from J. L. David to Andy Warhol. Painting, sculpture and architecture are discussed.

ART 283 COLOR THEORY 3 (0-6-0)

The student will continue the analysis and implementation of the principles and elements of design with an emphasis upon color theory.

ART 284 3-D DESIGN 3 (0-6-0)

The student will continue the study of principles of design and will employ these principles for works in both two and three dimensions. Emphasis will be upon personal solutions to design problems. Prerequisite: ART 250 or consent.

ART 285 INDEPENDENT STUDIO 3 (0-6-0)

A course designed to permit the student to work beyond the limits of the regular sequence of courses in a particular area of art. As the course title indicates, the student will be working independently on self-determined objectives utilizing the resources of the Art Department. Prerequisite: Completed sequence of art courses in the area of proposed independent study.

AUTOMOTIVE

AUT 1001 PRACTICAL AUTO BODY REPAIR I 7 (3-0-12)

This beginning course offers basic body repair, repairing minor rust, minor dents and spot repair with Lacquer Paint.

AUT 1002 AUTO BODY REPAIR II 7 (3-0-12)

The course offers body repair with attention to door, fender, etc. Installation and alignment of parts and overall refinishing with Enamel Paint will be emphasized.

AUT 1003 AUTO BODY REPAIR III 7 (3-0-12)
The course involves body repair with attention to basic gas welding, repairing of stretched metal, alignment and repair of inner structure with a general introduction to fiber glass.

AUT 1004 AUTO BODY REPAIR IV 7 (3-0-12)
The course involves body repair with attention to outer quarter panel replacement, door outer panel replacement, lower valance repair and lower trunk panel replacement.

AUT 1111 AUTO BODY REPAIR 8 (3-0-15)
Basic principles of automobile construction, design, and manufacturing. A thorough study of angles, crown, and forming of steel into the complex contour of the present day vehicles. The student applies the basic principles of straightening, aligning, and painting of damaged areas. Prerequisite: None.

AUT 1112 AUTO BODY REPAIR 8 (3-0-15)
A thorough study of the requirements for a metal worker, including the use of essential tools, forming fender flanges and beads, and straightening typical auto body damage. The student begins acquiring skills such as shaping angles, crowns, and contour of the metal of the body and fenders. Metal working and painting are also taught. Prerequisites: AUT 1111, WLD 1101, MAT 1101.

AUT 1113 METAL FINISHING AND PAINTING 8 (3-0-15)
Development of the skill to shrink stretched metal, soldering and leading, and preparation of the metal for painting. Straightening of doors, hoods, and deck lids; fitting and aligning. Painting fenders and panels, spot repairs, and complete vehicle painting; the use and application of power tools are included in the course. Prerequisite: AUT 1112, WLD 1105.

AUT 1114 BODY SHOP APPLICATIONS 11 (3-0-24)
General introduction and instruction in the automotive frame and front end suspension systems, the methods of operation and control and the safety of the vehicle. Unit job application covers straightening of frames and front wheel alignment. The student applies all phases of training. Repair order writing, parts purchasing, estimates of damage, and developing the final settlement with the adjuster. Prerequisites: AUT 1113, DFT 1101.

AUT 1116 BASIC PLASTICS REPAIRING 3 (2-0-3)
General introduction to fiberglass construction of automobiles, trucks, and boats. Covers basic principles and practices of repairing bodies and other components utilizing fiberglass construction. Also includes theory and application of Jel-Coates, Webb-weights, resins, and epoxies. Prerequisite: AUT 1111.

AUT 1117 FRAME STRAIGHTENING AND ALIGNING 2 (1-0-3)
General introduction and instruction in the automotive frame and front end suspension systems, the methods of operation and control, and the safety of the vehicle. Unit job application covers straightening frames and their alignment. Prerequisites: AUT 1112, WLD 1105.

AUT 1131 ADVANCED BODY REPAIR I 7 (3-0-12)
Major body repair with attention to installation of quarter panel complete with wheel house and floor pan, installation of top roof panel.

AUT 1132 ADVANCED BODY REPAIR II 7 (3-0-12)
Major body repair with attention to replacement of windshield, back glass, quarter glass regulator, adjustment and alignment.

AUT 1133 ADVANCED BODY REPAIR III 7 (3-0-12)
Major body repair with attention to straightening of frames and unitized body alignment. General introduction to writing estimates.

AUT 1134 ADVANCED BODY REPAIR IV 7 (3-0-12)
Major body repair with attention to writing complete estimates with Glen Michels, MIC, and all major related Crash Books.

BIOLOGY

BIO 151 GENERAL BIOLOGY 4 (3-3-0)
A study of the basic biological principles included in both animal and plant kingdoms. Emphasis is placed upon life, taxonomy, the cell, cell divisions, cellular metabolism, photosynthesis, nucleic acids, and genetics.

BIO 152 GENERAL BIOLOGY 4 (3-3-0)

A continuation of BIO 151. Included are a survey of the plant kingdom and ecological studies, including both plants and animals. Prerequisite: BIO 151.

BIO 153 GENERAL BIOLOGY 4 (3-3-0)

A continuation of general biology. Included are a survey of the animal kingdom and the structure and function of man as one of the animals. Prerequisite: BIO 151.

BIO 155 MAN AND HIS ENVIRONMENT 3 (3-0-0)

This course is an introduction to human ecology. Discussed are causes and possible solutions of problems such as over-population, air-water-food-noise pollution, pesticides, vanishing resources-wilderness-wildlife, atomic radiation, and urbanization. Films, guest speakers, five field trips, panel discussions and lectures are used.

BIO 252 ANATOMY AND PHYSIOLOGY 4 (3-2-0)

A study of the anatomy and physiology of the human body with integration and homeostasis as leading factors. Emphasis is on the cell, tissues of the body, integumentary system, skeletal system, muscular system, and digestive system.

BIO 253 ANATOMY AND PHYSIOLOGY 4 (3-2-0)

A continuation of BIO 252. The systems covered are the nervous, special senses, circulatory and immunological. Prerequisite: BIO 252.

BIO 254 ANATOMY AND PHYSIOLOGY 4 (3-2-0)

A continuation of BIO 253. The systems covered are the respiratory, excretory, endocrine, and reproductive. Prerequisite: BIO 253.

BUSINESS

BUS 120 OFFICE MACHINES 4 (3-2-0)

A survey course in which students learn to operate the most commonly used office machines.

BUS 121 MACHINES TRANSCRIPTION 4 (3-2-0)

A course designed to develop proficiency in office work which requires the use of transcribing units. Prerequisite: Ability to type 50 words per minute.

BUS 122 FILING 3 (3-0-0)

A study of the fundamentals and theory of filing with special emphasis on alphabetic, geographic, subject, numeric, and other filing systems.

BUS 123 BUSINESS MATHEMATICS 4 (3-2-0)

Meaningful explanations, illustrations, and problems designed to give students an understanding of and the ability to apply mathematical concepts to business activities.

BUS 130 PRINCIPLES OF INDUSTRIAL MANAGEMENT 5 (5-0-0)

The basic managerial decisions; organizational structure including plant location, building requirements, and internal factory organization and problems of factory operation and control, planning, scheduling, routing factory production, stores control, labor control, purchasing, and cost control. Plant problems are utilized as lab experiments.

BUS 131 INDUSTRIAL MARKETING 5 (5-0-0)

Purchasing and distribution costs; consumption patterns; channels of distribution; marketing of consumer goods; shipping, specialty, agricultural and industrial goods; service marketing; speculation and hedging; wholesaling; shipping and warehousing; exporting and trade movements; standardization and grading; pricing, government regulation of competition; sales promotional activities; merchandising practices.

BUS 133 INDUSTRIAL SAFETY 5 (5-0-0)

Problems of accidents and fire in industry. Management and supervisory responsibility for fire and accident prevention. Additional topics cover accident reports and the supervisor; good housekeeping and fire prevention; machine guarding and personnel protective equipment; state industrial accident code and fire regulations; the first aid department and the line of supervisory responsibility; job instruction and safety instruction; company rules and enforcement; use of safety committees; insurance carrier and the Insurance Rating Bureau; and advertising and promoting a good safety and fire prevention program.

BUS 134 PRINCIPLES OF SUPERVISION 3 (3-0-0)

Introduces the basic responsibilities and duties of the supervisor and his relationship to superiors, subordinates and associates. Emphasis on securing an effective work force and the role of the supervisor. Methods of supervision are stressed.

BUS 135 WORK MEASUREMENT 5 (5-0-0)

A study of the principles of work simplification including administration of job methods, improvement, motion study fundamentals, and time study techniques. Use of flow and process charts, multiple activity charts, operation charts, flow diagrams, and methods evaluation are included topics. Prerequisite: BUS 132.

BUS 136 PERSONAL DEVELOPMENT 3 (3-0-0)

A study of the principles that will be of assistance in the understanding of inter-personal relations on the job. Motivation, feelings, and emotions are considered with particular reference to on-the-job problems.

BUS 150 BUSINESS LAW 3 (3-0-0)

A general course designed to acquaint the student with the subject of Business Law and to examine fully the subject of contracts.

BUS 151 BUSINESS LAW 3 (3-0-0)

A continuation of Business 150. Topics include the sale of goods, commercial paper, insurance, estate planning, court procedures, agency, and employment. Prerequisite: BUS 150 or permission of instructor.

BUS 152 INTRODUCTION TO BUSINESS 5 (5-0-0)

An introduction to the various areas of business available for concentrated investigation. The business environment, ownership forms, organization, marketing, and the physical factors of the business are examined. Also, personnel, stocks, bonds, insurance, accounting, business statistics, budgets, forecasting, and the legal environment of business are surveyed.

BUS 153 TYPEWRITING 3 (1-4-0)

Development of basic typewriting skills and principles and their application with emphasis on speed and accuracy.

BUS 154 TYPEWRITING 3 (1-4-0)

A continuation of Business 153, with emphasis on outlines, letter styles, and typing from draft copy. Prerequisite: BUS 153 or permission of instructor.

BUS 155 TYPEWRITING 3 (1-4-0)

A continuation of Business 154 with emphasis on manuscripts, legal documents and duplicating processes. Prerequisite: BUS 154 or permission of instructor.

BUS 156 SHORTHAND 4 (3-2-0)

Mastery of the fundamentals of Gregg Shorthand theory and speed building. Prerequisite: Ability to type or permission of instructor.

BUS 157 SHORTHAND 4 (3-2-0)

A continuation of the study of Gregg Shorthand theory and development of dictation and transcription skills. Prerequisite: BUS 156 or permission of instructor.

BUS 158 SHORTHAND 4 (3-2-0)

Development and application of the principles of Gregg Shorthand theory, with emphasis on accuracy and speed. Prerequisite: BUS 157 or permission of instructor.

BUS 161 ACCOUNTING PRINCIPLES 4 (3-2-0)

This first quarter of accounting builds the basic foundation for further study. Topics included are the basic accounting structure, journals, ledgers, the completion of the cycle for a service and mercantile enterprise, receivables, payables, inventory methods, deferrals, accruals, practical problems and case studies.

BUS 162 ACCOUNTING PRINCIPLES 4 (3-2-0)

A continuation of BUS 161. Items covered are plant and intangible assets, internal control, payroll systems, concepts and principles, partnership, corporations, departments, branches, practical problems, and case studies. Prerequisite: BUS 161 or permission of instructor.

BUS 163 ACCOUNTING PRINCIPLES 4 (3-2-0)

A continuation of BUS 162. Topics are an introduction to cost accounting, budgetary control, income taxes, management concern for cost and revenue relationships, special analysis, special statements, practical problems and case studies. Prerequisite: BUS 162 or permission of instructor.

BUS 201 TYPEWRITING 3 (1-4-0)

An expansion of the development of typewriting principles and skills and their application with emphasis on speed and accuracy. Prerequisite: One year of typewriting or permission of instructor.

BUS 202 TYPEWRITING 3 (1-4-0)

Business letter styles, legal papers, tabulation, business and accounting reports, manuscripts, and forms applicable to the business office are emphasized. Prerequisite: BUS 201 or permission of instructor.

BUS 203 TYPEWRITING 3 (1-4-0)

Development of sustained production of forms used in the business office. Prerequisite: BUS 202 or permission of instructor.

BUS 211 SHORTHAND AND TRANSCRIPTION 4 (3-2-0)

A review of Gregg Shorthand theory and the principles of English grammar with emphasis on the student's ability to take and transcribe correctly from familiar and unfamiliar dictation at varying rates of speed. Prerequisite: BUS 158 or permission of instructor.

BUS 212 SHORTHAND DICTATION AND TRANSCRIPTION 4 (3-2-0)

This course emphasizes speed, accuracy, vocabulary, and transcription abilities to enable the student to meet the requirements of the business office. Prerequisite: BUS 211 or permission of instructor.

BUS 213 SHORTHAND DICTATION AND TRANSCRIPTION 4 (3-2-0)

A continuation of BUS 212. Prerequisite: BUS 212 or permission of instructor.

BUS 220 BUSINESS COMMUNICATIONS 3 (3-0-0)

The study and the composition of business letters and other forms of communication. Prerequisite: Ability to type or permission of instructor.

BUS 221 OFFICE PROCEDURE 3 (3-0-0)

Efforts will be made to observe and direct students in developing those characteristics and personality traits which are essential in the modern business office. Training in office duties and procedures will be emphasized. Prerequisite: Ability to type or permission of instructor.

BUS 222 OFFICE PROCEDURE 3 (3-0-0)

A continuation of BUS 221. This course presents a series of integrated office activities which emphasize the administrative aspects of secretarial work. Prerequisite: BUS 221 or permission of instructor.

BUS 223 PRINCIPLES OF SELLING 3 (3-0-0)

A study of the fundamentals of effective selling, qualifications and obligations of sales persons.

BUS 224 BUSINESS MANAGEMENT 5 (5-0-0)

Principles of business management including overview of major functions of management, such as planning, staffing, controlling, and financing. Clarification of the decision-making function versus the operating function. Role of management in business — qualifications and requirements.

BUS 225 PRINCIPLES OF MARKETING 5 (5-0-0)

A survey of the functions and problems involved with getting products moved from the producer to the consumer.

BUS 226 OFFICE MANAGEMENT 5 (5-0-0)

The study of the principles of management as it relates to the office.

BUS 228 CONSUMER FINANCE 3 (3-0-0)

This course is oriented toward personal financing as opposed to financing the business entity. Topics include budgets, insurance, credit procedures, personal investments, housing, real estate, retirement planning, and estate planning.

BUS 229 BUSINESS FINANCE 3 (3-0-0)

Financing of business units, as individuals, partnerships, corporations, and trusts. Topics include short-term financing, long-term financing, financing federal, state, and local government and the factors affecting supply of funds, monetary and credit policies.

BUS 230 QUALITY CONTROL 4 (3-2-0)

Principles and techniques of quality control and cost saving. Organization and procedure for efficient quality control. Functions, responsibilities, structure, costs reports, records, personnel and vendor-customer relationships in quality control. Sampling inspections, process control and tests of significance.

BUS 232 LABOR ECONOMICS AND LABOR RELATIONS 5 (5-0-0)

Emphasis is placed on the history of the labor movement in the United States; the development of methods and strategies by labor organizations and by management; the shift in the means of public control; and the factors of income and economic security.

BUS 233 FOREMANSHIP SUPERVISION 3 (3-0-0)

The foreman's responsibility for planning, organizing, directing, controlling, and coordinating supervisory activities. It teaches the supervisor the basic functions of an organization and his responsibilities, policies and procedures, and rules and regulations.

BUS 234 PERSONNEL MANAGEMENT 3 (3-0-0)

Principles of organization and management of personnel, procurement, placement, training, performance checking, supervision, remuneration, labor relations, fringe benefits, and security.

BUS 235 PRODUCTION PLANNING 5 (5-0-0)

Day-to-day plant direction; forecasting, product planning and control, scheduling, dispatching, routine and inventory control. Case histories are discussed in the classroom, and courses of corrective action are developed. Actual layouts are utilized for planning and control.

BUS 237 RETAILING 3 (3-0-0)

A study of the role of retailing in our distribution system. Topics include the development of present retail practices, functions performed, principles governing effective operation, and managerial problems resulting from current economic and social trends.

BUS 238 BUSINESS INSURANCE 5 (5-0-0)

This course is an approach to the study of the principles of risk, risk management, and insuring techniques in the context of the managerial decision-making process. Topics include risk and the nature of insuring devices, life, health, retirement, property, and liability insuring devices; planning and integrating risk treatment programs, and insuring organizations and their functions.

BUS 239 BUYING AND MERCHANDISING 3 (3-0-0)

A study of the organization of industrial and commercial purchasing, methods of procurement, purchasing policies, sources of supply and legal aspects. Topics included are the psychology of dealing with people, vendor relations, planning merchandise assortment, inventory and stock control and pricing.

BUS 240 ADVERTISING 3 (3-0-0)

A study of advertising from three different points of view: the marketing viewpoint, the communications viewpoint, and the viewpoint of the consumer who is exposed to advertising everyday, to provide a better understanding of the force of advertising in our economic environment.

BUS 241 INTERMEDIATE ACCOUNTING 4 (3-2-0)

A review and expansion of accounting principles which includes, among other aspects, the balance sheet, income statement, earnings statement, fundamental processes of recording, cash and temporary investments, and analysis of working capital. Prerequisite: BUS 163 or permission of instructor.

BUS 242 INTERMEDIATE ACCOUNTING 4 (3-2-0)

Additional study of intermediate accounting with emphasis on current liabilities, investments, plant and equipment, intangibles, and long-term liabilities. Prerequisite: BUS 241.

BUS 243 INTERMEDIATE ACCOUNTING 4 (3-2-0)

A continuation of BUS 242 which includes study of paid-in capital upon corporate formation and subsequent to corporate formation, all aspects of retained earnings and the retained earnings statement, statements from incomplete records, errors, and financial statement analysis. Prerequisite: BUS 242.

BUS 244 COST ACCOUNTING 4 (3-2-0)

A study of the nature and purposes of cost accounting; accounting for direct labor, materials, and overhead; job cost, standard cost and principles and procedures; selling and distribution cost, budgets, and executive use of cost figures. Prerequisite: BUS 163 or permission of instructor.

BUS 246 TAXES 4 (3-2-0)

A study of the application of federal and state taxes to various businesses and business conditions, income taxes, payroll taxes, intangible taxes, capital gain taxes, sales and use taxes, excise taxes, and inheritance taxes. Prerequisite: BUS 161 or permission of instructor.

BUS 248 AUDITING 4 (3-2-0)

A study of conducting audits and investigations, setting up accounts based on audits, collecting data on working papers, arranging and systematizing the audit, and writing the audit report. Emphasis on detailed audits, internal auditing, and internal control. Prerequisite: BUS 163 or permission of instructor.

BUS 1103 BUSINESS OPERATIONS 3 (3-0-0)

An introduction to the business world, problems of small business operation, basic business law, business forms and records, financial problems, ordering and inventorying, layout of equipment and offices, methods of improving business, and employer-employee relations.

CARPENTRY

CAR 1001 INTRODUCTION TO CARPENTRY AND WOODWORKING 7 (3-0-12)

The course involves operative care and safe use of basic carpentry and woodworking tools. Major topics of study include selecting and preparation of site, preparation of footing, foundation, and studs. Simple framing, cabinetmaking, building codes, and finishing will also be covered. Prerequisite: None.

CAR 1002 FRAMING AND WOOD TECHNOLOGY 7 (3-0-12)

Instruction will be given in the principles and practices of frame construction beginning with the foundation and finishing in sheathing. Layout and construction methods, common types of roofs, using standard rafter construction will be studied. More complex machine and hand tool work will also be performed with advanced work in cabinetmaking and finishing. Prerequisite: None.

CAR 1003 CABINETMAKING, MILLWORK AND FIXTURES 7 (3-0-12)

All areas of cabinetmaking will be covered. Major topics will be design and layout, construction and finishing of cabinets, finishing, jointing and shaping, advanced tool and machine work, and case goods. Prerequisite: None.

CAR 1004 FINISHING AND WOODWORKING 7 (3-0-12)

The course will include exterior and interior trim work with emphasis on selection, installation, and completion of the project. Included will be windows, doors, flooring, molding, cornices, hardware, and cabinets. Prerequisite: None.

CAR 1101 CARPENTRY 9 (4-0-15)

A brief history of carpentry and present trends of the construction industry. The course will involve operation, care, and safe use of carpenters' handtools and power tools in cutting, shaping and joining construction materials used by the carpenter. Major topics of study will include theoretical and practical applications involving methods and materials of construction, building layout, preparation of site, footings and foundation wall construction including form construction and erection. Prerequisite: None.

CAR 1102 CARPENTRY: FRAMING 10 (4-0-18)

Instruction is given in the principles and practices of frame construction beginning with the foundation skills and including floor joists, subfloors, wall studs, ceiling joists, rafters, bridgings, bracings, sheathings, and interior wall partitions. Roof construction includes the layout and construction methods of common types of roofs using standard rafter construction, truss construction, and post and beam construction. Application and selection of sheathing and roofing is included. Consideration is given to the coordination of carpentry work with installation of the mechanical equipment such as electrical, air conditioning, heating, and plumbing. Prerequisite: CAR 1101, DFT 1111.

CAR 1103 CARPENTRY: MILLWORK AND CABINETMAKING 10 (4-0-18)

Cabinetmaking and millwork as performed by the general carpenter for building construction. Use of shop tools and equipment will be emphasized in learning methods of construction of millwork and cabinetry. Practical applications will include measuring, layout and construction of base and wall cabinets, built-in-desk, door and window frames, stairs, and interior and exterior cornice and trim. Materials and finishes will also be studied. Prerequisite: CAR 1101, DFT 1110.

CAR 1104 CARPENTRY: FINISHING 10 (4-0-18)

Exterior and interior trim and finish carpentry will complete the general carpentry program. Included will be materials and methods used in finishing carpentry such as exterior cornice, door and window trim, interior flooring, door and window facing, moldings and cornice construction; installation of building equipment and cabinets. Prerequisite: CAR 1103, DFT 1111.

CAR 1113 CARPENTRY: ESTIMATING 4 (3-0-3)

This is a practical course in quantity "take off" from prints of jobs performed by the carpenter. Figuring the quantities of materials needed and costs of building various components and structures. Prerequisites: DFT 1111, MAT 1112.

CAR 1114 BUILDING CODES 4 (3-2-0)

A study is made of building codes and the minimum requirements for local, county, and state construction regulations. This involves safety, sanitation, mechanical equipment and materials. Also, a review will be made of the minimum property requirements of the Federal Housing Administration and the North Carolina State Building Code. Prerequisite: CAR 1103.

CHEMISTRY

CHM 101 CHEMISTRY 5 (4-2-0)

Study of the physical and chemical properties of substances, chemical changes; elements, compounds, gases, chemical combinations; weights and measurements; theory of metals; acids, bases, salts, solvents, solutions, and emulsions. In addition, study of carbohydrates; electrochemistry, electrolytes, and electrolysis in their application of chemistry to industry.

CHM 102 CHEMISTRY 4 (3-2-0)

A course designed to introduce the agriculture students to the fundamental concepts of chemistry. Topics of study include chemical symbols, formulas, atomic structure, periodic law, chemical bonding, the gaseous state, the kinetic molecular theory and chemical calculations.

CHM 161 GENERAL CHEMISTRY 4 (3-3-0)

A course designed to introduce a student to the fundamental concepts of chemistry. Topics of study include chemical symbols, formulas, atomic structure, periodic law, chemical bonding, the gaseous state, the kinetic molecular theory and chemical calculations.

CHM 162 GENERAL CHEMISTRY 4 (3-3-0)

A continuation of CHM 161. Emphasis to be placed on the liquid and solid states, solutions, electrolytes, colloids, oxidation-reduction reactions, and chemical equilibrium. Prerequisite: CHM 161.

CHM 163 GENERAL CHEMISTRY 4 (3-3-0)

A continuation of CHM 162. Emphasis to be placed on the study of thermodynamics, electrochemistry, solubility product principle, hydrolysis, with an introduction to nuclear chemistry, biochemistry, and organic chemistry. Laboratory will include semimicro qualitative analysis. Prerequisite: CHM 162.

CHM 164 PHYSIOLOGICAL CHEMISTRY 4 (3-3-0)

A course structured to provide an understanding of the scope, aims, and fundamentals of modern chemistry by presenting facts, theories, and principles of the science. The course will serve as the basic chemistry course for student nurses.

CHM 271 ORGANIC CHEMISTRY 4 (3-3-0)

A study of the compounds of carbon. Emphasis will be on the alkanes and alkenes, their reactions, and stereochemistry. Prerequisite: CHM 163.

CHM 272 ORGANIC CHEMISTRY 4 (3-3-0)

A continuation of CHM 271 including the study of aromatics, reaction mechanisms, theoretical syntheses, and IR spectroscopy. Prerequisite: CHM 271.

CHM 273 ORGANIC CHEMISTRY 4 (3-3-0)

A continuation of the topics of CHM 272 including natural products and polymers. Prerequisite: CHM 272.

CIVIL ENGINEERING

CIV 1101 SURVEYING 3 (2-0-3)

Basic instrumentation and topography, together with field trips and drafting room application of site surveying. Prerequisite: MAT 1103.

CRIMINAL JUSTICE – PROTECTIVE SERVICE TECHNOLOGY

CJC 101 INTRODUCTION TO CRIMINAL JUSTICE 5 (5-0-0)

This course is designed to familiarize the student with a philosophy and history of law enforcement, its legal limitations in our society, the primary duties and responsibilities of the various agencies in the criminal justice field, the basic processes of justice, an evaluation of law enforcement's current position, and an orientation relative to the profession as a career.

CJC 102 CRIMINOLOGY 5 (5-0-0)

A general course designed to introduce the student to the causation of crime and delinquency. The historical and contemporary aspects of crime, law enforcement, punishment, and correctional administration will be discussed.

CJC 110 JUVENILE DELINQUENCY 5 (5-0-0)

General survey of juvenile delinquency as an individual and social problem, theories of delinquency, causation, and methods of correction and prevention. The course will present a general overview of the juvenile court.

CJC 115 CRIMINAL LAW 3 (3-0-0)

A course designed to present a basic concept of criminal laws and to provide a legal groundwork for those who seek to enter the criminal justice field.

CJC 125 CRIMINAL PROCEDURE 5 (5-0-0)

This course is designed to provide the student with a review of court systems; procedures from incident to final disposition; principles of constitutional, federal, state, and civil laws as they apply to and affect law enforcement.

CJC 201 JUVENILE DETENTION AND CORRECTION 3 (3-0-0)

This course examines the juvenile court procedure, juvenile detention and juvenile correction in North Carolina.

CJC 202 TRAFFIC ENFORCEMENT 5 (5-0-0)

A study which covers the history of the traffic enforcement problems and gives an overview of the problem as it exists today. Attention will be given to the three E's (enforcement, evaluation, effectiveness) and legislation, the organization of the traffic unit, the responsibilities to the traffic function of the various units within the law enforcement agency, enforcement tactics, evaluation of the traffic program effectiveness and the allocation of men and materials. Accident investigation is stressed.

CJC 203 CORRECTIONS 3 (3-0-0)

An examination of the total correctional process from law enforcement through the administration of justice, probation, prisons and correctional institutions, and parole. This course will provide a history and philosophy in the field of correction.

CJC 204 PAROLES, PROBATION, AND PARDONS 3 (3-0-0)

Probation as a judicial process and parole as an executive function are examined as community-based correctional programs and the use of pardons is reviewed.

CJC 205 CRIMINAL EVIDENCE 5 (5-0-0)

Instruction covers the kinds and degrees of evidence and the rules governing the admissibility of evidence in court.

CJC 206 COMMUNITY RELATIONS 3 (3-0-0)

This course will provide the student with an understanding of community structures as they relate to minority groups, peer groups, socioeconomic groups, leader groups, and group relations. Emphasis will be placed on the organization and function of these groups as they relate to the profession of criminal justice-protective service.

CJC 207 CONFINEMENT FACILITIES ADMINISTRATION 3 (3-0-0)

This course is designed to familiarize the student with the supervision and administration of confinement facilities involving techniques of inmate supervision, security, medical care of prisoners, food preparation, sanitation, and various legal aspects controlling detention facilities, correctional institutions, and jails.

CJC 209 CORRECTION LAW 3 (3-0-0)

This course is designed to familiarize the student with the specific laws as they pertain to correction, care, custody, and control.

CJC 210 CRIMINAL INVESTIGATION 5 (4-2-0)

This course introduces the student to fundamentals of investigation; crime scene search; recording, collection, and preservation of evidence; sources of information, interview and interrogation, case preparation, and court presentation.

CJC 211 CRIMINALISTICS 5 (4-2-0)

An introduction to the forensic aspects of police science. The subject matter concentrates on the procedures to be undertaken in the crime lab. Emphasis is placed on fulfilling all legal requirements regarding the handling and evaluation of physical evidence. All students participate in a crime scene and the investigation of all evidence pertaining to the crime.

CJC 216 ADVANCED CRIMINAL LAW 3 (3-0-0)

A continuation of Criminal Law I which presents a basic concept of criminal law and creates an appreciation of the rules under which one lives in our system of government. Primary emphasis will be placed on North Carolina law. Prerequisite: CJC 115.

CJC 217 PATROL PROCEDURES 3 (3-0-0)

This course defines the purposes of patrols and describes the types of patrols. It explains the operation of police vehicles on patrol, answering calls — emergency and non-emergency and felony in progress. It provides the student the opportunity to develop powers of perception, and observation concerning persons, places, and things. Safe driving techniques and use of equipment are presented.

CJC 220 POLICE ORGANIZATION AND ADMINISTRATION 5 (5-0-0)

Introduction to principles of organization and administration, discussion of the service functions, e.g., personnel management, police management, training, communications, records, property maintenance, and miscellaneous services.

CJC 221 CORRECTION ADMINISTRATION 3 (3-0-0)

Emphasis is placed on the principles of administration in the correctional setting including budgeting and financial control, recruitment and development of staff, administrative decision making, public relations, and other correctional administrative functions.

CJC 223 CORRECTION COUNSELING 4 (3-2-0)

This course is designed to provide the student with information pertaining to counseling techniques as they apply to the needs of a correction officer. Time is provided for role playing and other practical techniques.

CJC 224 REHABILITATION 3 (3-0-0)

This course is designed to provide the student with the opportunity to explore the different avenues of rehabilitation. The new and innovative techniques of rehabilitation will be emphasized as they relate to successful methods.

CJC 230 COUNSELING 3 (3-0-0)

This course is designed to present the basic elements of counseling. The basic elements will be applied to the different socioeconomic groups in our society.

CJC 234 COMMUNITY-BASED CORRECTION 3 (3-0-0)

Community resources that can be utilized in the correctional process are examined such as vocational rehabilitation, alcohol detoxification and other units, welfare services, child guidance and mental health clinics, employment services, private volunteer, professional assistance, legal aid, and other pertinent services.

CJC 240 SECURITY SYSTEMS 5 (5-0-0)

This course is designed to introduce the student to an overview of the total security concept. The topic is broken down into industrial, commercial, and retail security.

CJC 241 PROPERTY CONTROL 3 (3-0-0)

This course is designed to provide the student with an understanding of the physical layouts and control procedures of industrial, commercial, and retail facilities. Methods of protection such as electrical gates, magnetic passes, perimeter lighting, alarm systems, fencing, and other means of protection are covered.

CJC 242 COMMON CARRIER PROTECTION 3 (3-0-0)

This course is designed to provide the student with an understanding of various common carrier functions. Effective control measures such as bills of lading, waybills, notices of shipment, and free astray forms are presented as they relate to the security officer's function. ICC regulations as they relate to company policies and state laws are covered.

CJC 243 INDUSTRIAL ACCIDENT INVESTIGATION AND REPORTING 3 (3-0-0)

This course is designed to present techniques and procedures that will enable the security officer to adequately investigate an industrial accident and report relevant facts important to the investigation. Familiarization with pertinent phraseology and terms is stressed.

CJC 244 CIVIL AND CRIMINAL LEGAL RESPONSIBILITY 3 (3-0-0)

This course emphasizes the civil and criminal legal responsibility of security personnel. It involves control and supervision of company property including entries and exits. It stresses the legal liability of the individual and of the company.

CJC 245 ELECTRONIC DETECTION AND POLYGRAPH 5 (5-0-0)

This course is designed to provide the student with an understanding of electronic detection devices and equipment. It stresses the legal aspects limiting their use. The use of the polygraph as an investigative aid is covered.

CJC 246 SECURITY INVESTIGATION 3 (3-0-0)

This course is designed to familiarize the student with utilization of personnel security questionnaires and other sources of background data to assure complete investigations. Familiarization with investigative techniques and procedures are emphasized.

CJC 247 RETAIL SECURITY 3 (3-0-0)

This course is designed to familiarize the student with information concerning all aspects of retail security protection. Internal safeguards including employee and customer activities are covered.

CJC 248 FIRE PREVENTION AND SECURITY 3 (3-0-0)

This course presents information on the different types of fires and their prevention. Types of fire extinguishers and fire alarm systems are presented. Methods of organizing and training fire brigades are stressed.

CJC 249 SURVEILLANCE TECHNIQUES 3 (3-0-0)

This course is designed to cover all types of surveillance techniques and the use of the surveillance equipment. Emphasis is placed on loss prevention in relation to employee and customer activities in industrial, commercial, and retail settings.

DANCE

DAN 151 BALLET – MODERN TECHNIQUE 2 (0-4-0)
Fundamentals of ballet and modern dance. Emphasis on technique and practice.

DAN 152 BALLET – MODERN TECHNIQUE 2 (0-4-0)
Continuation of DAN 151. Prerequisite: DAN 151 or permission of the instructor.

DAN 153 BALLET – MODERN TECHNIQUE 2 (0-4-0)
Continuation of DAN 152. Prerequisite: DAN 152 or permission of the instructor.

DAN 157 JAZZ TECHNIQUE 2 (0-4-0)
Fundamentals of jazz. Emphasis on technique and practice.

DAN 158 JAZZ TECHNIQUE 2 (0-4-0)
Continuation of DAN 157. Prerequisite: DAN 157 or permission of instructor.

DAN 159 JAZZ TECHNIQUE 2 (0-4-0)
Continuation of DAN 158. Prerequisite: DAN 158 or permission of instructor.

DAN 160 DANCERCISE 1 (0-2-0)
Emphasis placed on exercise through dance technique. This course may satisfy one hour of physical education requirements for graduation purposes. It may be taken only twice for credit.

DAN 251 BALLET – MODERN TECHNIQUE 2 (0-4-0)
More advanced study of ballet and modern dance. Performing experience. Prerequisite: previous training equivalent to DAN 153.

DAN 252 BALLET – MODERN TECHNIQUE 2 (0-4-0)
Continuation of DAN 251. Prerequisite: DAN 251.

DAN 253 BALLET – MODERN TECHNIQUE 2 (0-4-0)
Continuation of DAN 252. Prerequisite: DAN 252.

DAN 257 JAZZ TECHNIQUE 2 (0-4-0)
More advanced study of jazz technique. Performing experience. Prerequisite: previous training equivalent to DAN 159.

DAN 258 JAZZ TECHNIQUE 2 (0-4-0)
Continuation of DAN 257. Prerequisite: DAN 257.

DAN 259 JAZZ TECHNIQUE 2 (0-4-0)
Continuation of DAN 258. Prerequisite: DAN 258.

DESIGN

DES 1122 DESIGN FOR PHOTOGRAPHY 4 (2-0-6)
This course will cover both two and three dimensional forms and the various photography techniques used to express them. Plastics, paper, wire, plaster and balsa wood models along with life drawings, landscape painting and other multi-dimensional forms will be prepared and studied in relation to photographic design.

DES 1125 COLOR THEORY AND APPLICATION 4 (2-4-0)
A study of the spectrum and color combinations designed to provide the student with knowledge to be used in graphic production printing. The student will be assigned projects designed to provide an understanding of color renditions as they relate to color offset printing.

DRAFTING

DFT 101 DRAFTING FUNDAMENTALS 3 (0-6-0)
Theory and practice in technical communication through the sketching and drafting media. Practice in both sketching and instrument drawing in the orthographic projection, pictorial drawings, section, revolutions and sheet metal development.

DFT 102 DRAFTING MECHANICS 3 (0-6-0)

Laboratory exercises in problem solutions through the drawing method. The skill of application and utilization of drawing as a means of communication will be emphasized. Prerequisite: DFT 101 or permission of instructor.

DFT 103 ARCHITECTURAL FUNDAMENTALS 3 (0-6-0)

Ramifications of Architectural drawing and design related to residential applications including: preliminary considerations; room planning; exterior design; working drawings; code and specification consideration. Prerequisite: DFT 101 or permission of instructor.

DFT 1001 DRAFTING 7 (3-0-12)

The course is an introduction to drafting and the study of drafting practices. Instruction is given in single-stroke lettering, freehand sketching consisting of orthographic and pictorial drawing. Instrument drawing of orthographic projection, single and double auxiliary views also will be presented.

DFT 1002 DRAFTING 7 (3-0-12)

The course will present sections, details, and assembly drawings with their application to practical drawings. Intersections and developments will be studied in reference to the sheet metal trades. Methods of drawing and projecting axonometric, oblique, and perspective drawings will be studied with practical application to pictorial drawings. The problem of dealing with practical design elements involving points, lines, planes, connectors, and a combination of these will be used for a graphic analysis of space problems. Prerequisite: DFT 1001.

DFT 1003 DRAFTING 7 (3-0-12)

The course is an introduction to architectural drafting. Further technique development in lettering, sketching and instrument drawing will be presented. Construction details and design will be studied and working drawings will be prepared from preliminary sketches. Prerequisite: DFT 1002.

DFT 1004 DRAFTING 7 (3-0-12)

The course will include preparing complete working drawings for a complex architectural structure by individual and group participation. FHA standards, building codes and cost estimates will be studied. Prerequisite: DFT 1003.

DFT 1104 BLUEPRINT READING 3 (3-0-0)

Interpretation and reading of blueprints. Information on the basic principles of the blueprint: views, dimensioning procedures and notes.

DFT 1105 BLUEPRINT READING: MECHANICAL 3 (3-0-0)

Interpretation of blueprints as they are used in industry; study of prints supplied by industry; making plans of operations; introduction to drafting room procedures; sketching as a means of passing on ideas, information and processes.

DFT 1110 BLUEPRINT READING: BUILDING TRADES 1 (0-0-3)

Principles of interpreting blueprints and specifications common to the building trades. Development of proficiency in making three view and pictorial sketches. Prerequisite: None.

DFT 1111 BLUEPRINT READING AND SKETCHING 1 (0-0-3)

Principles of interpreting blueprints and specifications common to the building trade. Practice in reading details for grades, foundations, floor plans, elevations, walls, doors and windows, and roofs of buildings. Development of proficiency in making three view and pictorial sketches. Prerequisite: DFT 1110.

DFT 1113 BLUEPRINT READING: ELECTRICAL 1 (0-0-3)

Interpretation of schematics, diagrams and blueprints applicable to electrical installations with emphasis on electrical plans for domestic and commercial buildings. Sketching schematics, diagrams, and electrical plans for electrical installations using appropriate symbols and notes according to the applicable codes will be a part of this course. Prerequisite: DFT 1110.

DFT 1116 BLUEPRINT READING: AIR CONDITIONING 2 (1-0-3)

A specialized course in drafting for the heating, air conditioning and refrigeration student. Emphasis will be placed on reading of blueprints that are common to the trade; blueprints of mechanical components, assembly drawings, wiring diagrams and schematics, floor plans, and shop sketches. The student will make tracings of floor plans and lay out air conditioning systems. Prerequisite: DFT 1104.

DFT 1117 BLUEPRINT READING: WELDING 3 (3-0-0)

A thorough study of trade drawings in which welding procedures are indicated. Interpretation, use and application of welding symbols, abbreviations, and specifications. Prerequisite: DFT 1104.

DFT 1118 PATTERN DEVELOPMENT AND SKETCHING 1 (0-0-3)

Continued study of welding symbols; methods used in layout of sheet steel; sketching of projects, jigs and holding devices involved in welding. Special emphasis is placed on developing pipe and angle layouts by the use of patterns and templates.

DFT 1121 DRAFTING 9 (5-0-12)

An introduction to drafting and the study of drafting practices. Instruction is given in the selection, use and care of instruments, single-stroke lettering, applied geometry, freehand sketching consisting of orthographic and pictorial drawings. Orthographic projection, reading and instrument drawing of principal views, single auxiliary views (primary), and double (oblique) auxiliary views will be emphasized. Dimensioning and note practices will be studied with reference to the American Standards Association practices. Methods of reproducing drawings will be included at the appropriate time. Prerequisite: None.

DFT 1122 DRAFTING 7 (5-0-6)

The trainee will study simple and successive revolutions and their applications to practical problems. Sections and conventions will be studied and both detail and assembly sections will be drawn. Intersections and developments will be studied by relating the drawing to the sheet metal trades. Models of the assigned drawings will be made from construction paper, cardboard, or similar materials as a proof of the solution to the problems drawn. Methods of drawing and projecting axonometric, oblique, and perspective drawings will be studied with emphasis on the practical applications of pictorial drawings. Various methods of shading will be introduced and dimensioning and sectioning of oblique and axonometric pictorials will be done. Prerequisite: DFT 1121.

DFT 1123 DRAFTING: TECHNIQUES FOR PRINTERS 4 (2-0-6)

The field of drafting is introduced as the student begins study of drawing principles and practices for print reading and describing objects in the graphic language. Basic skills and techniques of drafting included are: use of drafting equipment, lettering, freehand orthographic and pictorial sketching, geometric construction, orthographic instrument drawing of principal views, and standards and practices of dimensioning. The principles of isometric, oblique, and perspective are introduced.

DFT 1125 DESCRIPTIVE GEOMETRY 4 (3-0-3)

Graphical analysis of space problems. The problems deal with practical design elements involving points, lines, planes, connectors, and a combination of these. Included are problems dealing with solid geometry theorems. Where applicable, each graphical solution shall be accompanied by the analytical solution. Prerequisite: DFT 1121 and MAT 1103 or equivalent.

DFT 1131 MECHANICAL DRAFTING 9 (5-0-12)

An introduction to mechanical drafting beginning with problems concerning precision and limit dimensioning. Methods of fastening materials, and fasteners: keys, springs, rivets, and welding. Symbols will be studied and drawings will be made involving these items. Principles of design will be introduced with the study of basic mechanisms of motion transfer; gears, cams, power trains, pulleys, belting and methods of specifying and calculating dimensions will be studied. Drawings will be made involving these mechanisms. Prerequisite: DFT 1122.

DFT 1132 MECHANICAL DRAFTING 10 (5-0-15)

Principles of design sketching, design drawings, layout drafting, detailing from layout drawings, production drawings and simplified drafting practices constitute areas of study. Forging and casting drawings will be made from layouts. Specifications, parts list and bill of materials are emphasized in this course. The student will develop a complete set of working drawings of a tool, jig, fixture or simple machine and learn principles of design, handbook and manual usage. Prerequisite: DFT 1131.

DFT 1143 BUILDING MECHANICAL EQUIPMENT 3 (3-0-0)

General study of heating, air conditioning, plumbing and electrical equipment, materials and symbols. Building code requirements pertaining to residential and commercial structures. Reading and interpretation of working drawings by mechanical engineers.

DFT 1144 BUILDING MATERIALS AND METHODS 3 (3-0-0)

Study of materials used in the construction of architectural structures. Their economic values and limitations affected by locality, budget and codes. Field trips to construction sites and study of manufacturer's specifications for materials. Standard sizes of structural materials and modular construction techniques. Prerequisite: None.

DRAMA

DRA 151 DRAMA APPRECIATION 3 (2-2-0)

An introductory course in drama, with particular attention to the actor's understanding and exercise of basic skills and techniques. The course is designed to develop imagination, self-awareness, and the ability of improvisation. Work in individual projects.

DRA 152 STAGE CRAFTS 3 (2-2-0)

Continuation of DRA 151. Designed for work as a group in scenes and various projects. Opportunity to perform and learn stage directions and definitions. Prerequisite: DRA 151 or permission of the instructor.

DRA 153 STUDENT'S THEATRE 3 (2-2-0)

Participation in some area of a drama performance. Designed for bringing various areas of the theatre together. Prerequisite: DRA 152 or permission of the instructor.

ECONOMICS

ECO 103 ECONOMICS OF AGRICULTURE 3 (3-0-0)

Students in this course will be taking a look at the organization and operation of our economic system. Economic forces determining the level of prices, production, and consumption, role of firms, households, and government in economic decisions. The role of agriculture in our economic system will receive special emphasis.

ECO 251 MACROECONOMICS 5 (5-0-0)

The economic analysis of the economy as a whole. It includes such areas of study as total employment, total production, the business cycle, the general price level, and measures used to stabilize the level of business activity.

ECO 252 MICROECONOMICS 5 (5-0-0)

The economic analysis of the problems of individuals, firms, and industries. It includes such areas as price determination, forces of supply and demand, competition, monopoly, and profit maximization. Prerequisite: ECO 251 or permission of the instructor.

EDUCATION

EDU 100 INSTRUCTIONAL MEDIA 3 (3-0-0)

A study of the various equipment and materials used in the instructional process.

EDU 101 TEACHER'S AIDE INTERNSHIP 5 (0-10-0)

Each student will work for three quarters in an Iredell County school as a teacher's aide, assisting teachers in actual classroom work. Interns may work either at the kindergarten, elementary, or junior high level, and will assist the teachers in clerical work, and instruction, as well as spending some time in observing classroom instructional strategies.

EDU 102 TEACHER'S AIDE INTERNSHIP 5 (0-10-0)

A continuation of EDU 101.

EDU 103 TEACHER'S AIDE INTERNSHIP 5 (0-10-0)

A continuation of EDU 102.

EDU 104 ADMINISTRATION AND INTERPRETATION OF TESTS 3 (3-0-0)

A study of the rationale for group and individual testing. This includes the administration as well as the use of tests of intelligence, interest, and achievement in educational and career planning. A practicum experience is closely correlated with classroom activities so that students may apply knowledge and skills to an actual on-the-job learning situation.

EDU 261 INTRODUCTION TO EDUCATION 3 (3-0-0)

A survey of various phases of education and teaching. The course provides an introduction to the fundamental principles, techniques, and procedures, objectives, and historical views in education. It is designed primarily for students entering the teaching profession.

EDU 1101 ACTIVITIES FOR YOUNG CHILDREN 4 (3-3-0)

Designed to promote understanding of the need for play and developmental activities for children. Emphasis will be placed on the knowledge of and implementation of activities appropriate to children at various levels of development.

EDU 1102 MEDIA AND MACHINES 3 (3-0-0)

The scope of the course will include practical consideration involved in selecting, using and evaluating the use of educational media to be found in schools today. Experiences in the operation and proper care of audio-visual equipment and materials will be provided. The preparation of inexpensive teacher-student made audio-visual material will also be stressed. Examples will be drawn from all subject fields and from all elementary levels of instruction.

EDU 1103 MUSIC FOR CHILDREN 4 (3-3-0)

Study of music which is appropriate for young children and ways of integrating music into the total program of activities. Students learn to tuilize a wide variety of materials for rhythm, instrumental performance, and dramatic play. Laboratory sessions provide opportunities for learning songs and developing extensive files; field experience provides opportunities to participate in and evaluate music activities for various age groups.

EDU 1104 LIBRARY TECHNIQUES 3 (3-0-0)

The student will become familiar with the resources offered by the school library including selection of materials, use of the card catalogue and use of the Reader's Guide to Periodical Literature. The student will be able to assist others in selecting resource materials.

EDU 1105 SCIENCE FOR CHILDREN 4 (3-2-0)

Study of those scientific facts, concepts, and phenomena that are of interest to young children. Laboratory experiences provide opportunities to carry out simple experiments in which young children could participate. Each student will plan a science program which could be used as an integral component of the overall program for young children in group care.

EDU 1106 SCHOOL RECORDS AND REPORTS 3 (3-0-0)

An introduction to such school records as the register, the permanent record, the bus report, the textbook inventory report, and others. The student will develop the capability of preparing, under the direction of the proper staff or faculty members, such reports.

EDU 1108 ART FOR CHILDREN 4 (3-2-0)

Study of art media in relation to the creative process in young children, of the educational component that each medium reinforces, and of the ways a variety of low-cost art activities can be incorporated into a program for young children. Laboratory sessions provide firsthand experience with all of the media, opportunities to explore the uses of each, and practice in the care and storage of materials. Each student will plan a meaningful sequence of art activities which could be incorporated into a program for young children.

EDU 1109 ARTS & CRAFTS 3 (1-4-0)

This course is designed to give the student maximum practical experience in creative crafts projects and to provide the opportunity to master the techniques of teaching these projects to varying age groups in a number of school settings. The student should be exposed to several types of arts and crafts projects including ceramics, metal-work, weaving, and many types of minor crafts.

EDU 1110 LITERATURE IN THE EARLY CHILDHOOD PROGRAM 3 (3-0-0)

Study of literature for young children, with emphasis on criteria for evaluating the literary value of children's books. Extensive reading and development of a topical file provide resources for selection of appropriate materials to use in field practice, to develop skill in oral reading and in story telling.

EDU 1123 CONCEPTUAL READING AND LANGUAGE DEVELOPMENT 3 (3-0-0)

Study of means for helping children develop in their ability to communicate and to formulate concepts about their environment. Emphasis is on utilization of all facets of the program to reinforce concept development and to increase vocabulary through stimulation of oral communication. Reading assignments and recordings of children's speech provide opportunities to study speech development, to establish realistic expectations and to identify children with needs for special attention to language development.

EDU 1125 PARENT AND HOME DEVELOPMENT 3 (3-0-0)

Designed to develop understanding of the rewards and difficulties of parents. Role playing provides opportunities to practice ways of working with parents through home visits, individual conferences, informal conversations, and group meetings. The relationship of the child care facility to other community agencies is explored, including ways each can best serve children and their families. Emphasis is given to the responsibility of child care workers to know about community resources, to be sensitive to needs of parents, and to help parents become aware of and utilize services of the community.

EDU 1146 TEACHER'S AIDE INTERNSHIP 10 (5-0-15)

Each student will work for one quarter in an Iredell County school as a teacher's aide, assisting teachers in actual classroom work. Interns may work either at the kindergarten, elementary, or junior high level, and will assist the teachers in clerical work and instruction as well as spending some time in observing classroom instructional strategies.

ELECTRICITY

ELC 1001 DIRECT AND ALTERNATING CURRENT 7 (3-0-12)

The course includes a study of the electrical structure of matter and electron theory, the relationship between voltage, current, and resistance in series, parallel, and series-parallel circuits, an analysis of direct current circuits by Ohm's law and Kirchoff's law. A study of the sources of direct current voltage potential, fundamental concepts of alternating current flow; reactance, impedance, phase angle, power, and resource are also studied.

ELC 1002 ALTERNATING CURRENT AND DIRECT CURRENT MACHINES AND CONTROLS 7 (3-0-12)

The course provides fundamental concepts in single and polyphase alternating currents, voltages, power measurements, transformers, and motors. Instruction in the use of electrical test instruments in circuit analysis, the basic concepts of AC and DC machines, and simple system controls are also presented. Prerequisite: ELC 1001 or approval of instructor.

ELC 1003 RESIDENTIAL WIRING 7 (3-0-12)

The course provides instruction and application in the fundamentals of blueprint reading, planning, layout, and installation of wiring in residential applications. This will include services, panel board, lighting, fusing, wire sizes, and the study of related areas of the National Electric Code. Prerequisite: ELC 1001 or approval of instructor.

ELC 1004 COMMERCIAL AND INDUSTRIAL WIRING 7 (3-0-12)

The course includes the study of layouts, planning and installation of wiring systems in commercial and industrial complexes with some emphasis upon blueprint reading and symbols. This will include national electric code, fundamental application of practical installations of wiring, and conduit preparation of simple systems. Prerequisite: ELC 1001 or approval of instructor.

ELC 1102 APPLIED ELECTRICITY 3 (2-0-3)

The use and care of test instruments and equipment used in servicing electrical apparatus for air conditioning and refrigeration installations. Electrical principles and procedures for trouble-shooting of the various electrical devices used in air conditioning, heating, and refrigeration equipment. Included will be transformers, various types of motors and starting devices, switches, electrical heating devices and wiring. Prerequisite: PHY 1101.

ELC 1112 DIRECT AND ALTERNATING CURRENT 9 (5-0-12)

A study of the electrical structure of matter and electron theory, the relationship between voltage, current, and resistance in series, parallel, and series-parallel circuits. An analysis of direct current circuits by Ohm's Law and Kirchoff's Law. A study of the sources of direct current voltage potentials. Fundamental concepts of alternating current flow, reactance, impedance, phase angle, power, and resonance. Analysis of alternating current circuits. Prerequisite: None.

ELC 1113 ALTERNATING CURRENT AND DIRECT CURRENT MACHINES AND CONTROLS 10 (5-0-15)

Provides fundamental concepts in single and polyphase alternating current circuits, voltages, currents, power measurements, transformers and motors. Instruction in the use of electrical test instruments in circuit analysis. The basic concepts of AC and DC machines and simple system controls. An introduction to the type control used in small appliances such as thermostats, times, or sequencing switches. Prerequisite: ELC 1112.

ELC 1124 RESIDENTIAL WIRING 8 (5-0-9)

Provides instruction and application in the fundamentals of blueprint reading, planning, layout, and installation of wiring in residential applications such as services, switchboards, lighting, fusing, wire sizes, branch circuits, conduits, National Electrical Code regulations in actual building mock-ups.

ELC 1125 COMMERCIAL AND INDUSTRIAL WIRING 9 (5-0-12)

Layout, planning, and installation of wiring systems in commercial and industrial complexes, with emphasis upon blueprint reading and symbols, the related National Electrical Codes, and the application of the fundamentals to practical experience in wiring, conduit preparation, and installation of simple systems. Prerequisite: ELN 1118, ELC 1124.

ELECTRONIC DATA PROCESSING

EDP 101 LOGIC AND DECISION MAKING 3 (3-0-0)

An introductory course in programming logic. The study of re-evaluation of a problem through problem analysis, developing algorithms and flowcharting. Prerequisite: EDP 151 or permission of the instructor.

EDP 102 COBOL PROGRAMMING 4 (3-3-0)

This course is intended to introduce the student to programming computers for commercial and business applications using the COBOL language. The student will obtain experience in solving practical problems using this language. Prerequisite: EDP 151 or permission of the instructor.

EDP 151 INTRODUCTION TO DATA PROCESSING 4 (3-2-0)

An introductory course designed to acquaint students with the overall field of data processing. It includes a historical review of data processing, basic terminology, fundamental concepts of data processing, job opportunities and requirements in the D.P. field. The laboratory exercises are devoted to familiarizing students with the basic data processing equipment. This course is designed for students majoring in areas other than data processing as well as data processing majors.

EDP 201 RPG II 4 (3-2-0)

An introduction to RPG II programming. In addition to coding, the student will be familiarized with the basic components, procedures, and organization of computing systems. Prerequisite: EDP 102 or permission of the instructor.

EDP 202 RPG II 4 (3-3-0)

A continuation of EDP 201 which includes an intensive study in coding and programming of the RPG computer language. Prerequisite: EDP 201 or permission of the instructor.

EDP 203 SYSTEMS 4 (3-2-0)

A course in business systems analysis and design covering its scope, methods and types of investigation, feasibility study, justifications for design, design of input, design of output, and storage files. Prerequisite: EDP 101 or permission of instructor.

EDP 204 SYSTEMS 4 (3-2-0)

A continuation of EDP 202 with emphasis on design of system control, presentation to management, testing, debugging, and documentation of a business system. Prerequisite: EDP 202 or permission of the instructor.

EDP 205 FINAL PROJECT 5 (2-6-0)

The student will select and design a computerized system and its resulting computer program utilizing the RPG language. Prerequisite: EDP 203 or permission of the instructor.

ELECTRONICS

ELN 1002 RADIO OPERATION AND SERVICING 7 (3-0-12)

An introduction to vacuum tubes and semiconductors with a study of their associated circuitry. Operating characteristics of RF and AF amplifiers. Principles of radio reception and trouble shooting techniques. Prerequisite: ELC 1001 or permission of the instructor.

ELN 1003 RADIO AND BLACK & WHITE TELEVISION SERVICING 7 (3-0-12)

A study of black and white television receivers. Detailed study of all circuits of the TV receiver in classroom and laboratory sessions. Supervised servicing practice to develop skills in using test equipment to repair and maintain television and radio receivers. Prerequisite: ELN 1002 or permission of instructor.

ELN 1004 RADIO AND COLOR TELEVISION SERVICING 7 (3-0-12)

Theory of operation of the television circuits peculiar to color receivers. Practical test bench techniques including trouble shooting, alignment, and convergence. Continuation of Radio and Black & White Television Servicing. Prerequisite: ELN 1003 or permission of instructor.

ELN 1101 TROUBLESHOOTING TECHNIQUES 6 (5-0-3)

A study of troubleshooting procedures for vacuum tube and semiconductor circuitry. The principles of operation of a basic superheterodyne receiver are studied in order to explain the uses of block diagrams and schematic diagrams. The proper use of test equipment is explained along with the methods of collection and analysis of data.

ELN 1103 INTRODUCTION TO CONTROL DEVICES 9 (5-0-12)

Introduction to vacuum tube and semiconductors used to control direct and alternating current. Applications of diodes, triodes, tetrodes, pentodes and transistors in power suppliers, voltage amplifiers, power amplifiers, oscillators and the advantage, disadvantage, and uses of each.

ELN 1105 INDUSTRIAL ELECTRONICS AND INSTRUMENTATION 8 (5-0-9)

A study of electronic components and circuits used in industrial applications. Included is a study of sensory devices and detectors, the associated circuitry and indicating devices, relays, switching and monitoring circuits and other devices applicable to the field of industrial electronics.

ELN 1107 ELECTRONIC COMMUNICATIONS 5 (5-0-0)

A study of the history, operating principles, and the different types of communication methods. Included topics are telephones, radio, television.

ELN 1118 INDUSTRIAL ELECTRONICS 6 (4-0-6)

Basic theory, operating characteristics, and application of vacuum tubes such as diodes, triodes, tetrodes, pentrodes, power supplied using diodes, and other basic applications. Prerequisite: ELC 1113.

ELN 1119 INDUSTRIAL ELECTRONICS 6 (4-0-6)

Basic industrial electronic systems such as motor controls, magnetic amplifier controls, welding control systems using thyratron tubes and other basic types of systems commonly found in most industries. Prerequisite: ELN 1118.

ELN 1127 TELEVISION SERVICING 10 (5-0-15)

A study of the principles of operation of black and white and color television. The use of block diagrams and schematic diagrams is covered in detail. A large portion of the time is spent trouble-shooting sets in the lab. During this extensive troubleshooting, the proper use of test equipment is learned through signal injection, signal tracing, alignment, convergence, and taking voltage measurements.

ELN 1130 ELECTRONIC PROJECTS 5 (1-0-12)

A course explaining the basic operating principles and repair techniques of small home type appliances. Included topics are: electric irons, toasters, percolators, vacuum cleaners, electric mixers, blenders and other home appliances. The major emphasis is directed toward the servicing and repair of the different appliances.

ENGLISH

ENG 098 DEVELOPMENTAL ENGLISH 1 (0-5-0)

Designed for students who need a review of basic grammar and composition skills before entering English 101 or 151. This course is not intended for transfer credit, but it will count as an elective for graduation purposes.

ENG 101 GRAMMAR I 3 (3-0-0)

A functional course designed to prepare technical students for day-to-day work experiences. Emphasis on grammar, vocabulary, and spelling.

ENG 101-5 GRAMMAR 3 (3-2-0)

An in-depth study of grammar, vocabulary, and spelling. Designed as a functional course for the technical student.

ENG 101A GRAMMAR I (Ag) 3 (3-2-0)

This course is designed to improve the student's ability in grammar, spelling, and oral communication. Emphasis will be placed on the development of the student's ability to convey his thoughts and impressions to the people who live about him.

ENG 102 COMPOSITION 3 (3-0-0)

A continuation of English 101. Grammar, spelling, and vocabulary will be stressed. Emphasis on the topic sentence and paragraph practice stressing expository and argumentative techniques. Short research articles pertinent to the student's technical curriculum. Prerequisite: ENG 101 or 101-5.

ENG 102-5 COMPOSITION 3 (3-2-0)

An in-depth study of grammar, spelling, and vocabulary. Emphasis on the topic sentence and paragraph practice stressing expository and argumentative techniques. Short research articles pertinent to the student's technical curriculum.

ENG 102A COMPOSITION (Ag) 3 (3-2-0)

This course is designed as a business approach to letter and report writing, a review of mass communications, and an evaluation of the quality and importance of information distributed through different types of mass media.

ENG 103 TECHNICAL WRITING 3 (3-0-0)

A continuation of functional English with an emphasis on the formats of various types of written reports, graphics, and the techniques of planning and organizing the long formal report. Prerequisite: ENG 102 or 102-5.

ENG 103-5 TECHNICAL WRITING 3 (3-2-0)

An in-depth study of the format of various types of written reports, graphics, and the techniques of planning and organizing the formal report.

ENG 150 INTRODUCTION TO RESOURCE MATERIAL 1 (1-0-0)

Introduction to the Learning Resources Center and instruction to effective usage of study materials available in the L.R.C. and other sources.

ENG 151 COMPOSITION I 3 (3-0-0)

A course in expository writing designed to develop purpose and organization. Emphasis on topic sentence, paragraph patterns, formal outline, expository essay. Study of models. Review of grammar and spelling. Prerequisite: Satisfactory score on the English placement test.

ENG 151-5 COMPOSITION I 3 (3-2-0)
A course for college transfer students who score low on English placement test. Includes, in addition to the above, concentrated review of grammar, punctuation, spelling, sentence structure.

ENG 152 COMPOSITION II 3 (3-0-0)
Continuation of ENG 151. Essay patterns. Research techniques. Short literary papers. Study of short fiction. Prerequisite: ENG 151 or 151-5.

ENG 152-5 COMPOSITION II 3 (3-2-0)
For students needing continued review of basic writing skills. Content same as ENG 152. Prerequisite: ENG 151 or 151-5.

ENG 153 COMPOSITION III 3 (3-0-0)
Continuation of ENG 152. Literary essays using primary and secondary sources. Emphasis on proper use and documentation of reference materials. Study of poetry and drama. Prerequisite: ENG 152 or 152-5.

ENG 153-5 COMPOSITION III 3 (3-2-0)
For students needing continued review of basic writing skills. Study of grammar, spelling, punctuation, vocabulary, sentence structure. Literary essays using primary and secondary sources. Emphasis on proper use and documentation of reference materials. Study of poetry and drama. Prerequisite: ENG 152-5.

ENG 261 MAJOR BRITISH WRITERS 5 (5-0-0)
A literary and historical study of Chaucer, Shakespeare, and Milton with related writing assignments. Prerequisite: ENG 153.

ENG 265 ENGLISH LITERATURE 5 (5-0-0)
A survey of selected 19th and 20th century British authors with collateral readings from each period studied. Prerequisite: ENG 153.

ENG 271 AMERICAN LITERATURE I 3 (3-0-0)
A critical and historical survey of American literature from the Colonial period through the Transcendalists. Prerequisite: ENG 153.

ENG 272 AMERICAN LITERATURE II 3 (3-0-0)
A continuation of the survey of American literature from the Romantics through Dickinson. Prerequisite: ENG 153.

ENG 273 AMERICAN LITERATURE III 3 (3-0-0)
A continuation of the survey of American literature from the rise of Naturalism to the present time. Prerequisite: ENG 153.

ENG 274 CHILDREN'S LITERATURE 5 (5-0-0)
A survey of children's literature of all eras, from the earliest writings through contemporary. It includes a study of the authors and illustrators. The course is designed for teacher aides, especially for those who will be working in grades one through six.

ENG 1102 COMMUNICATION SKILLS 3 (3-0-0)
Designed to promote effective communication through correct language usage in speaking and writing.

FRENCH

FRE 151 ELEMENTARY FRENCH I 5 (5-0-0)
A beginning course for students who have had no French. Much oral work, drill in grammatical principles, written composition, conversation, dictation, and pronunciation are stresses. French 151 and 152 are equivalent to two years of high school French. Senior colleges that require two years of foreign language for admission accept these courses for entrance credit or six hours elective credit.

FRE 152 ELEMENTARY FRENCH II 5 (5-0-0)
A continuation of FRE 151. Prerequisite: FRE 151.

FRE 251 INTERMEDIATE FRENCH I 5 (5-0-0)
A review of grammatical principles, composition, dictation, conversation, and reading. First-hand knowledge of French and the French people is encouraged through current events, movies, and French publications. Prerequisite: Two years of high school French or FRE 152.

FRE 252 INTERMEDIATE FRENCH II 5 (5-0-0)
A continuation of FRE 251. Prerequisite: FRE 251.

FRE 261 FRENCH LITERATURE I 5 (5-0-0)
This is a study of French literature from the Middle Ages through the 18th Century. Extensive reading, lectures, and reports in French are required. Prerequisite: FRE 252.

FRE 262 FRENCH LITERATURE II 5 (5-0-0)
This is a study of French literature of the 19th and 20th centuries. Prerequisite: FRE 261.

GEOGRAPHY

GEO 261 PHYSICAL GEOGRAPHY 5 (5-0-0)
The earth's astronomical relations, factors of weather and climate, and physical features.

GEO 262 WORLD REGIONS AND ECONOMIC GEOGRAPHY 5 (5-0-0)
Relations of human activities to the larger geographic regions of the world. Geographic factors involved in production, distribution, consumption, and conservation of the major crops, minerals and industries of the world.

HEALTH EDUCATION

HEA 251 FIRST AID AND SAFETY 3 (3-0-0)
Principles and practices as applied to emergency first aid, safety in the home, school and community.

HEA 252 PERSONAL HEALTH 3 (3-0-0)
The basic biologic and social concepts dealing with individual hygiene, disease, nutrition, mental health, heredity, and family hygiene.

HEA 253 COMMUNITY HEALTH 3 (3-0-0)
The basic principles and problems of contemporary community health and school hygiene are investigated. Topics include health education, recognition, evaluation and prevention of today's health problems, and trends in health.

HEA 1101 SCHOOL, HOME, AND COMMUNITY HEALTH 3 (3-0-0)
A study of influences on physical and mental health, individual practices which aid in maintaining good physical and mental health throughout the life span and responsibilities of those working with young children to maintain personal health and to serve as models for health practices.

HISTORY

HIS 151 HISTORY OF WESTERN CIVILIZATION I 5 (5-0-0)
An eclectic approach to the history of Western Civilization from prehistoric times through the civilization of Egypt, Mesopotamia, Greece, Rome, and Medieval Europe to about 1650. The course is designed to prepare the student for life in the world community by providing him a knowledge of those events of the past which have shaped the present and will influence the future.

HIS 152 HISTORY OF WESTERN CIVILIZATION II 5 (5-0-0)
A continuation of History of Western Civilization (151) covering the period from 1650 to the present. The course is designed to afford the student an opportunity to examine the major historical forces which have shaped the political, intellectual, material, and cultural setting of the present.

HIS 161 NORTH CAROLINA HISTORY 5 (5-0-0)

A survey of the history of North Carolina from the Colonial Era to the present with emphasis on development since the Civil War.

HIS 251 U. S. HISTORY I 5 (5-0-0)

The backgrounds of history, settlement, constitutional development, and union, along with manifest destiny and developing sectionalism. The course covers the period through 1865.

HIS 252 U. S. HISTORY II 5 (5-0-0)

Course covers Reconstruction, the progressive movement, World War I, and American history to the present. The student will become more aware of his nation as a part of the world community through this course.

HIS 261 NINETEENTH CENTURY EUROPE 3 (3-0-0)

An in-depth survey of European history from 1815 to 1914. A cause and effect approach is used to trace the growth of nationalism and liberalism, the development of socialism, and the imperialism which brought turbulence throughout much of the century and eventually triggered World War I.

HIS 271 TWENTIETH CENTURY EUROPEAN HISTORY 3 (3-0-0)

A consideration of the history of twentieth century Europe, beginning with the background of World War I, the political innovations between wars, World War II and its aftermath, and the significant political social and cultural events which shaped the present. In addition to a factual examination, the student will relate historical events with his own situation.

HIS 272 CIVIL WAR AND RECONSTRUCTION 3 (3-0-0)

A study of the American people during the crisis of the war and post-war periods with emphasis on the causes of the war, the national and international impact, and the political, economic and social aspects of the Reconstruction.

HIS 273 TWENTIETH CENTURY U. S. HISTORY 3 (3-0-0)

A history of the United States from 1932 to the present. Special emphasis is given to the changing political, economic and intellectual aspects of American democracy from the New Deal to the present.

INDUSTRIAL SAFETY

ISC 1101 INDUSTRIAL SAFETY 3 (3-0-0)

A study of the overall picture of the accident toll for the nation's population. It is designed to establish safe work habits in performing the occupation. Principles of accident prevention; injury sources and causes; accident costs; job safety analysis; accident investigation; methods of promoting safe practice, safety education and training; first aid, lifting — manually and mechanically; and fire prevention and protection are some of the topics discussed.

JOURNALISM

JOU 150 JOURNALISM 2 (0-4-0)

A practical publishing experience through the production of the Mitchell Community College yearbook, The Circle. Areas covered include staff organization, budgeting, promotion, production, and distribution of the yearbook.

JOU 151 JOURNALISM 2 (0-4-0)

A continuation of JOU 150.

JOU 152 JOURNALISM 2 (0-4-0)

A continuation of JOU 151.

MASONRY

MAS 1101 BRICKLAYING 10 (5-0-15)

The history of the bricklaying industry. Clay and shell brick, mortar, laying foundations, laying brick to a line, bonding, and tools and their uses. Laboratory work will provide training in the basic manipulative skills.

MAS 1102 BRICKLAYING 10 (5-0-15)

Designed to give the student practice in selecting the proper mortars, layout, and construction of various building elements such as foundations, walls, chimneys, arches and cavity walls. The proper use of bonds, expansion strips, wall ties and caulking methods are stressed. Prerequisite: MAS 1101.

MAS 1103 GENERAL MASONRY I 10 (5-0-15)

Layout and erection of reinforced grouted brick masonry lintels, fireplaces, glazed tile, panels, decorative stone, granite, marble, adhesive terra cotta and modular masonry construction theory and techniques. Prerequisite: MAS 1102.

MAS 1104 GENERAL MASONRY II 9 (3-0-18)

This is a practical course designed to tie together all the facts and techniques that are used in various types of general masonry work. The student will be involved in some major residential or commercial construction. Prerequisite: MAS 1103.

MAS 1113 MASONRY ESTIMATING 4 (3-0-3)

This is a practical course in quantity "take-off" from prints of the more common type jobs for bricklayers and masons. Figuring the quantities of materials needed and costs of building various components and structures. Prerequisite: MAS 1103.

MATHEMATICS

MAT 150 DEVELOPMENTAL MATHEMATICS 3 (5-0-0)

Designed for students who need a review of the basics before taking MAT 151. Topics include expressing numbers, whole numbers, number theory, fractions, decimals, ratio and proportion, and percentages. This is not intended for transfer credit and, although it will count as elective hours, it will not satisfy the mathematics requirement for graduation.

MAT 151 FUNDAMENTALS OF MATHEMATICS 5 (5-0-0)

Designed to give insight into the nature and structure of mathematics. Topics include a study of sets of numbers, properties of real numbers, polynomials, equations, inequalities, and graphs. Structured for liberal arts majors.

MAT 161 COLLEGE ALGEBRA 5 (5-0-0)

A modern approach to college algebra with emphasis on the logical structure of this discipline. Topics include numbers, sets, functions, graphs, equations, inequalities, matrices and determinants, the binomial theorem, and theory of equations.

MAT 162 TRIGONOMETRY 5 (5-0-0)

A continuation of MAT 161. Topics include those found in a traditional trigonometry course, with major emphasis on the analytical, rather than the numerical approach.

MAT 171 INTRODUCTORY STATISTICS 5 (5-0-0)

The course will include distributions, computation of averages and measures of dispersion, probability distributions, elements of sampling, correlation, prediction, tests of hypothesis. Offered on demand. Prerequisite: MAT 161 or 151.

MAT 191 CONCEPTS AND TECHNIQUES OF CALCULUS 5 (5-0-0)

A brief treatment of basic concepts of differential and integral calculus with applications to business, economics and the social and life sciences; polynomial exponential and logarithmic functions. Prerequisite: MAT 161 or permission of instructor.

MAT 251 CALCULUS I 5 (5-0-0)

This beginning course in calculus offers a review of analytical geometry and is a study of the derivative, its inverse, theorems, and applications. Special attention is placed on the ideas of limits and continuity. This course is designed for mathematics, science, or engineering majors. Prerequisite: MAT 161 or three years of high school mathematics.

MAT 252 CALCULUS II 5 (5-0-0)

A continuation of MAT 251. Includes integration and its applications, conic sections, limits and continuity. Prerequisite: MAT 251.

MAT 253 CALCULUS III 5 (5-0-0)

A continuation of MAT 252. The course includes exponential and logarithmic integration and differentiation, parametric equations, polar coordinates, methods of integration and further applications of the integral. Prerequisite: MAT 252.

MAT 1101 ESSENTIALS OF MATHEMATICS 5 (5-0-0)

Practical number theory is the basis for this course. Analysis of basic operations; addition, subtraction, multiplication, and division are included. Other topics studied are fractions, decimals, powers and roots, percentages, ratio and proportion. Some work with solid and plane geometric futures is undertaken as well; specifically determinations of volume and surface areas. Extensive practice is required. The student is also exposed to basic algebra.

MAT 1102 ALGEBRA 5 (5-0-0)

A presentation of basic concepts and operations of algebra; algebraic operations; addition, subtraction, multiplication, and division; fractions, letter representation, grouping, factoring, ratio and proportion, graphical and algebraic solution of first degree equations; solution of simultaneous equations by addition and subtraction; substitution, graphing exponents, logarithms, tables and interpolation, and slide rule.

MAT 1103 APPLIED TRIGONOMETRY 3 (3-0-0)

This course is designed to meet the needs of drafting students who will later apply trigonometric principles to surveying. Topics studied will include determining the area and volume of irregular figures, applying given formulas to calculate the radius of an inscribed or circumscribed circle, conversion between different units of area and volume, use of logarithms, solving triangles by trigonometric relationships, converting between rectangular and polar coordinates and graphing of the trigonometric functions.

MAT 1115 ELECTRICAL MATHEMATICS 5 (5-0-0)

An introductory algebra course with trigonometry and vectors needed in alternating current; algebraic operations of addition, subtracting, multiplication, and division; use of letters and signs, grouping, factoring, exponents, ratios, and proportions; algebraic and graphic solutions of first degree equations; introduction to trigonometric functions, their graphs and applications to right triangles addition, subtraction and resolution of vector quantities.

MECHANICS

MEC 1001 MACHINE SHOP THEORY AND PRACTICE I 7 (3-0-12)

Machine Practice I is designed to acquaint the student with machine shop safety rules, regulations, and practices; the use and care of basic machine shop tools and instruments; and the operation of common machines used in the machine shop trades.

MEC 1002 MACHINE SHOP THEORY AND PRACTICE II 7 (3-0-12)

A continuation of Machine Practice I to further develop knowledge and skill in the use of lathes, drills, grinders, and milling machines. Prerequisite: MEC 1001 or permission of instructor.

MEC 1003 MACHINE SHOP THEORY AND PRACTICE III 7 (3-0-12)

Basic Machine Practice II is a course designed to further develop knowledge of machines, shop practices, safety procedures, and the application of tools, instruments, and equipment. Prerequisite: MEC 1002 or permission of instructor.

MEC 1004 MACHINE SHOP THEORY AND PRACTICE IV 7 (3-0-12)

In this course lecture and laboratory will be coordinated to provide extended knowledge and experience in operations as related to production and quality controls; specialized applications of various machines, and general machine shop support. Laboratory practice will enable the student to develop a high degree of operation skill on selected machines. Prerequisite: MEC 1003 or permission of instructor.

MEC 1101 MACHINE SHOP THEORY AND PRACTICE I 10 (5-0-15)

An introduction to the machinist trade and the potential it holds for craftsmen. Deals primarily with the identification, care and use of basic hand tools and precision measuring instruments. Elementary layout procedures of lathe, drill press, grinding (off-hand) and milling machines will be introduced both in theory and practice.

MEC 1102 MACHINE SHOP THEORY AND PRACTICE II 10 (5-0-15)

Advanced operations in layout tools and procedures, power sawing, drill press, surface grinder, milling machine shaper. The student will be introduced to the basic operations on the cylindrical grinder and will select projects encompassing all the operations, tools and procedures thus far used and those to be stressed throughout the course. Prerequisite: MEC 1101 or permission of instructor.

MEC 1103 MACHINE SHOP THEORY AND PRACTICE III 11 (5-0-18)

Advanced work on the engine lathe, turning, boring and threading machines, grinders, milling machine and shaper. Introduction to lathing, cutting and measuring of spur, helical, and worn gears and wheels. The trainee will use precision tools and measuring instruments such as vernier height gages, protractors, comparators, etc. Basic exercises will be given on the turret lathe and on the tool and cutter grinder. Prerequisite: MEC 1102 or permission of instructor.

MEC 1104 MACHINE SHOP THEORY AND PRACTICE IV 11 (5-0-18)

Development of class projects using previously learned procedures in planning, blueprint reading, machine operations, final assembly and inspection. Additional processes on the turret lathe, tool and cutter grinder, cylindrical and surface grinder, advanced milling machine operations, etc. Special procedures and operations, processes and equipment, observing safety procedures faithfully and establishment of good work habits and attitudes acceptable to the industry. Prerequisite: MEC 1103 or permission of instructor.

MEC 1120 DUCT CONSTRUCTION AND MAINTENANCE 5 (3-0-6)

Study of various duct materials including sheet steel, aluminum, and fiber glass. Safety, sheet metal hand tools, cutting and shaping machines, fasteners and fabrication practices, layout methods, and development of duct systems. The student will service various duct systems and perform on-the-site repairs including ducts made of fiber glass. A study is made of duct fittings, dampers and regulators, diffusers, heater and air washers, fans, insulation and ventilating hoods. Prerequisite: DFT 1116, AHR 1123. Corequisite: AHR 1126.

MEC 1126 HEAT TREATING PRACTICE 3 (2-0-3)

Working knowledge of the methods of treating ferrous and non-ferrous metals. The effects of hardening, tempering, and annealing upon the structure and physical properties of metals. Trainees will be given the opportunity to acquaint themselves with the equipment and processes of heat training.

MEC 1133 MECHANICAL MAINTENANCE 7 (4-0-9)

To acquaint the student with the basic fundamentals of installation, maintenance and repair of machines. Miscellaneous electrical, mechanical, hydraulic, pneumatic, and lubrication devices are installed and maintained. Methods of rigging and machine installation, including location, leveling and fastening are covered. The use of precision measuring tools and checking for accuracy, squareness, and correct center line distances are stressed for pre-start inspection. Prerequisite: MEC 1101, DFT 1104, DFT 1113.

MUSIC

MUS 150 INTRODUCTION TO MUSIC THEORY 3 (3-0-0)

This course is designed for pre-music majors with little or no music theory background or non-music majors. Topics included are staff, notes, octave placement, clefs, scales (major and minor), rhythm, rhythmic notation, and meter signatures.

MUS 151 MUSIC THEORY I 3 (3-0-0)

A coordinated course combining the study of notation, clefs, modes, scales, intervals, triads, beginning harmony, and keyboard harmony. Must be taken concurrently with MUS 154.

MUS 152 MUSIC THEORY II 3 (3-0-0)
A continuation of MUS 151 with the following additions: principles of part writing and voice leading introduced, melody writing, elementary form and analysis. Must be taken concurrently with MUS 155. Prerequisite: MUS 151.

MUS 153 MUSIC THEORY III 3 (3-0-0)
A continuation of MUS 152 with the following additions: introduction of seventh chords. Must be taken concurrently with MUS 156. Prerequisite: MUS 152.

MUS 154 SIGHT-SINGING AND DICTATION I 2 (2-0-0)
The study of melodic and rhythmic elements of music using the moveable "do." Rhythmic and melodic dictation involving scale, and major and minor intervals. Emphasis on hearing mentally what is seen. Must be taken concurrently with MUS 151.

MUS 155 SIGHT-SINGING AND DICTATION II 2 (2-0-0)
A continuation of MUS 154. Must be taken concurrently with MUS 152. Prerequisite: MUS 154.

MUS 156 SIGHT-SINGING AND DICTATION III 2 (2-0-0)
A continuation of MUS 155. Must be taken concurrently with MUS 153. Prerequisite: MUS 155.

MUS 160 CHOIR I 1 (0-5-0)
The choir offers extensive training in choral technique, part singing, and interpretation. At various times during the year concerts are given in the Statesville area: at Mitchell, in churches, and in high schools. Each prospective member must be auditioned and approved by the director.

MUS 161 CHOIR II 1 (0-5-0)
A continuation of MUS 160.

MUS 162 CHOIR III 1 (0-5-0)
A continuation of MUS 161.

MUS 170 PIANO I 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
All major and minor scales. Major, minor, dominant seventh and diminished seventh arpeggios. Technical studies to include Two and Three Part Inventions, Sonatinas, and Sonatas. Literature to include easier works of the Romantic and Modern Schools.

MUS 171 PIANO II 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
A continuation of MUS 170. Prerequisite: MUS 170.

MUS 172 PIANO III 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
A continuation of MUS 171. Prerequisite: MUS 171.

MUS 173 VOICE I 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
Emphasis upon voice production, studies in scales, arpeggios, phrasing, vowel and consonant formations with coordinated breath support. Repertoire consisting of early Italian material, art songs, folk songs, sacred material and a study of vocal material from each period in Music History. Participation in choir and recitals is required of all voice students unless exempted because of hardship.

MUS 174 VOICE II 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
A continuation of MUS 173. Prerequisite: MUS 173.

MUS 175 VOICE III 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
A continuation of MUS 174. Prerequisite: MUS 174.

MUS 176 ORGAN I 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
Manual and pedal exercises; fundamentals of voice-leading; trios; chorale preludes; easier Romantic and contemporary pieces; hymn playing. Participation in choir and recitals is required of all organ students unless exempted because of hardship.

MUS 177 ORGAN II 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
A continuation of MUS 176. Prerequisite: MUS 176.

MUS 178 ORGAN III 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
A continuation of MUS 177. Prerequisite: MUS 177.

MUS 179 STRINGS I 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
Emphasis on tone production, bow control, scales, arpeggios, etudes (Waefort). Easier violin music.

MUS 180 STRINGS II 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
A continuation of MUS 179. Prerequisite: MUS 179.

MUS 181 STRINGS III 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
A continuation of MUS 180. Prerequisite: MUS 180.

MUS 182 CONDUCTING 2 (1-2-0)
The elements of choral conducting, designed primarily for prospective choir directors. Must be elected simultaneously with choir. Prerequisite: MUS 151.

MUS 188 BAND ENSEMBLE 1 (0-3-0)
Group experience offered in wind instruments, playing classical, pep, and jazz music. The Band plays for programs, home basketball games, and civic groups.

MUS 189 BAND ENSEMBLE 1 (0-3-0)
A continuation of MUS 188.

MUS 190 BAND ENSEMBLE 1 (0-3-0)
A continuation of MUS 189.

MUS 191 BRASS AND WOODWIND INSTRUMENTS 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
Emphasis placed on proper breath control, embouchure, and position, as well as good tone production and intonation. Materials and literature will be chosen on the basis of the student's ability and progress.

MUS 192 BRASS AND WOODWIND INSTRUMENTS 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
A continuation of MUS 191. Prerequisite: MUS 191.

MUS 193 BRASS AND WOODWIND INSTRUMENTS 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
A continuation of MUS 192. Prerequisite: MUS 192.

MUS 251 MUSIC THEORY IV 3 (3-0-0)
Analysis of modulations, altered chords, non-harmonic tones, borrowed chords, the Neapolitan Sixth Chord, ninth, eleventh, and thirteenth chords. Study of part-writing on secondary triads, seventh chords, and modulations. Form analysis. Keyboard harmony, chord progressions in major and minor keys, and modulations to closely related keys. Must be taken concurrently with MUS 254. Prerequisite: MUS 153.

MUS 252 MUSIC THEORY V 3 (3-0-0)
A continuation of MUS 251. Prerequisite: MUS 251. Must be taken concurrently with MUS 255.

MUS 253 MUSIC THEORY VI 3 (3-0-0)
A continuation of MUS 252. Prerequisite: MUS 252. Must be taken concurrently with MUS 251.

MUS 254 SIGHT-SINGING AND DICTATION IV 2 (2-0-0)
A continuation of the study of melodic and rhythmic elements in music along with harmonic dictation, using altered chords, modulation, and non-harmonic tones. Must be taken concurrently with MUS 251. Prerequisite: MUS 156.

MUS 255 SIGHT-SINGING AND DICTATION V 2 (2-0-0)
A continuation of MUS 254. Prerequisite: MUS 254. Must be taken concurrently with MUS 252.

MUS 256 SIGHT-SINGING AND DICTATION VI 2 (2-0-0)
A continuation of MUS 255. Prerequisite: MUS 255. Must be taken concurrently with MUS 253.

MUS 260 CHOIR IV 1 (0-5-0)
Same as MUS 160.

MUS 261 CHOIR V 1 (0-5-0)
A continuation of MUS 260.

MUS 262 CHOIR VI 1 (0-5-0)
A continuation of MUS 261.

MUS 270 PIANO IV 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
All technical exercises in rhythms. Preludes and Fugues by Bach, or French Suites, Mozart or Beethoven Sonatas or Concertos. Other literature will include works of Schumann, Chopin, and Brahms. Participation in choir and recitals is required unless exempted because of hardship. Each student at this level who is a piano major is required to participate in Sophomore recital. Prerequisite: MUS 172.

MUS 271 PIANO V 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
A continuation of MUS 270. Prerequisite: MUS 270.

MUS 272 PIANO VI 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
A continuation of MUS 271. Prerequisite: MUS 271.

MUS 273 VOICE IV 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
A more detailed study of voice. A continued study of the scales, arpeggios, diction, and phrasing, but in more progressive studies. Repertoire consisting of English, Italian, French and German songs. Study in oratorio and opera. Each student at this level who is a voice major is required to participate in Sophomore recital. All voice students must participate in choir unless exempted because of hardship. Prerequisite: MUS 175.

MUS 274 VOICE V 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
A continuation of MUS 273. Prerequisite: MUS 273.

MUS 275 VOICE VI 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
A continuation of MUS 274. Prerequisite: MUS 274.

MUS 276 ORGAN IV 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
Easy to moderately difficult works of Bach, including the "Little Organ Book"; representative works of similar difficulty from Baroque, Romantic, and contemporary literature; further study hymn and service playing. Participation in choir and recitals is required unless exempted because of hardship. Each student at this level who is an organ major is required to participate in Sophomore recital. Prerequisite: MUS 178.

MUS 277 ORGAN V 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
A continuation of MUS 276. Prerequisite: MUS 276.

MUS 278 ORGAN VI 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
A continuation of MUS 277. Prerequisite: MUS 277.

MUS 279 STRINGS IV 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
A continuation of MUS 181. Prerequisite: MUS 181.

MUS 280 STRINGS V 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
A continuation of MUS 279. Prerequisite: MUS 279.

MUS 281 STRINGS VI 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
A continuation of MUS 280. Prerequisite: MUS 280.

MUS 282 MUSIC LITERATURE I 2 (2-0-0)
An historical survey of music from its primitive beginning to the present, designed to develop a deeper understanding, appreciation, and enjoyment of music. Recorded music examples, listening assignments. Open to all students.

MUS 283 MUSIC LITERATURE II 2 (2-0-0)
A continuation of MUS 282. Prerequisite: MUS 282.

MUS 284 MUSIC LITERATURE III 2 (2-0-0)
A continuation of MUS 283. Prerequisite: MUS 283.

MUS 285 MUSIC APPRECIATION I 3 (3-0-0)
Stressed in this course is how to listen intelligently and creatively to music. It includes elements of music, styles, and a brief historical survey of music of the Middle Ages and the Renaissance eras. Open to all students.

MUS 286 MUSIC APPRECIATION II 3 (3-0-0)
A continuation of MUS 285 with emphasis on literature of the Baroque and Classical periods.

MUS 287 MUSIC APPRECIATION III 3 (3-0-0)
A continuation of MUS 286 with emphasis on literature of the Romantic and 20th Century periods.

MUS 288 BAND ENSEMBLE 1 (0-3-0)
Same as MUS 188.

MUS 289 BAND ENSEMBLE 1 (0-3-0)
A continuation of MUS 288.

MUS 290 BAND ENSEMBLE 1 (0-3-0)
A continuation of MUS 289.

MUS 291 BRASS AND WOODWIND INSTRUMENTS 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
A more intensive study of proper instrument technique and appropriate materials and literature. Prerequisite: MUS 193.

MUS 292 BRASS AND WOODWIND INSTRUMENTS 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
A continuation of MUS 291. Prerequisite: MUS 291.

MUS 293 BRASS AND WOODWIND INSTRUMENTS 1 (1-6-0), 2 (1-9-0), or 3 (1-12-0)
A continuation of MUS 292. Prerequisite: MUS 292.

PHILOSOPHY

PHI 151 INTRODUCTION TO ETHICAL DECISION MAKING 3 (3-0-0)
This course will have two major parts to it. Approximately one-third of the course will be devoted to a quick survey of various philosophical approaches to ethical decision making. The remaining two-thirds of the quarter will be devoted to a study of contemporary philosophical issues. The purpose of the course is to enable the student to see and understand the dimensions of ethical discourse and thereby make rational ethical decisions.

PHOTOGRAPHY

PHO 1107 FUNDAMENTALS OF PHOTOGRAPHY 5 (2-0-9)
Photography is concerned with interpreting and recording events with a camera and in this course these concepts are thoroughly examined. In addition, the science of the photographic process, with its precise balance between light and chemical energy, is explored. Other areas of investigation include the laws governing the photographic application of optics, the measurement and behavior of light, reciprocity, the chemistry of processing light-sensitive emulsions, flash, and densitometry. Some characteristics of photographic film; paper and processing chemicals are listed. In the laboratory extensive practical application is made of these principles, along with a thorough grounding in the use of various cameras, meters, densitometers, calculators, enlargers, and printers. Stressed are the three basics of a good photographer; technical skill, art ability, and business knowledge.

PHO 1109 INTERMEDIATE PHOTOGRAPHY 5 (2-0-9)
Intermediate photography is a continuation of fundamentals of photography. Visual interpretation in photography is stressed. The student continues in developing a visual concept of photography in relation to the fundamentals of lighting, composition, and art principles. Intermediate photography is concerned with the theory of the photographic process. This includes the broad application of photographic practices in the fields of advertising, science, and records which makes it imperative that the present-day photographer have a working knowledge of the principles and theories governing the chemical composition, exposure, and processing of negative and positive materials. Some of the subjects covered are: manufacture of photographic emulsions, the latent image, mechanism of exposure of silver halide grain, theory of development, mixing and washing, diffusion-transfer reversal processes, photographic sensitometry, photographic tone reproduction, structure of the developed image and the theory of exposure. Laboratory experiments of intermediate photography are tied in directly with the material covered.

PHO 1111 APPLIED PRINCIPLES OF PHOTOGRAPHY 5 (2-0-9)
Applied photography is a continuation of intermediate photography. Practical problems in applying techniques to authentic situations are stressed. The student concentrates on methods of making functional photographs that are effective and forceful. He is learning to use the camera as a tool for examination and transmission of facts, feelings and ideas. A wide variety of assignments, such as product photography, people, picture stories, creative visualization and documentaries are given that will introduce the many types of photography and improve laboratory skills.

PHO 1116 ADVANCED PHOTOGRAPHY 7 (2-0-15)

A continuation of professional fields of photography. During this quarter the student will be exposed to more advanced techniques of color photography and reproduction and he will be taught the more versatile aspects of color photographic equipment. In addition, the student will have a number of required projects which he will complete from camera to the finished print or transparency. These projects will be varied, but will put more emphasis on the particular area of specialization in which the student is most interested. The projects will also provide the vital practical experience which the student needs.

PHO 1135 PHOTOGRAPHY FOR PRINTERS 4 (2-0-6)

A beginning course in photography for printing students. Areas included are operation of a camera, developing film, printing pictures by contact and projection, and methods of lighting.

PHYSICAL EDUCATION

Each physical activity course may be repeated as often as the student desires, but the same physical activity course will be counted only twice for graduation.

The physical education program of activity course has been designed to give the student knowledge of a program to carry with him when he leaves school and to aid in his physical conditioning while he is in school. For these reasons, credit by examination may not be given for activity courses.

The College does not provide transportation to any off-campus Physical Education activity.

PED 150 ARCHERY 1 (0-2-0)

A course designed to teach the student the fundamental skills of the target bow and arrow.

PED 151 BADMINTON 1 (0-2-0)

A course designed to teach the student the rules, regulations and fundamental skills of badminton.

PED 152 BALLET AND MODERN DANCE 1 (0-2-0)

An introduction to the fundamentals and techniques of ballet and modern dance.

PED 153 BASKETBALL 1 (0-2-0)

A course designed to teach the students basic basketball technique with emphasis placed on rules, regulations and fundamental skills.

PED 154 BOWLING 1 (0-2-0)

A course designed to teach the students the fundamental skills of bowling.

PED 155 CONDITIONING 1 (0-2-0)

A course designed to teach the student basic conditioning techniques with an overall objective of physical fitness.

PED 156 FENCING 1 (0-2-0)

A course designed to teach the student the rules, regulations, and fundamental skills of fencing.

PED 157 GOLF 1 (0-2-0)

A course designed to teach the student the rules, regulations, etiquette and fundamental skills of beginning golf.

PED 158 SOCCER 1 (0-2-0)

A course designed to teach the fundamental skills of team soccer with an emphasis placed on team play, skills, rules, and regulations.

PED 159 SOFTBALL 1 (0-2-0)

A course designed to teach the basic fundamental skills of softball. Emphasis is placed on conditioning, rules, and skills.

PED 160 TENNIS 1 (0-2-0)

A course designed to teach basic fundamental tennis, with emphasis placed on skills, rules and regulations.

PED 161 VOLLEYBALL 1 (0-2-0)

A course designed to teach the basic skills of volleyball with emphasis placed on team play, rules and regulations.

PED 162 WEIGHT TRAINING 1 (0-2-0)

A course designed to teach fundamental skills related to weight training with an emphasis placed on body conditioning and control.

PED 164 VARSITY BASKETBALL 1 (0-5-0)

PED 165 VARSITY GOLF 1 (0-5-0)

PED 166 VARSITY TENNIS 1 (0-5-0)

PED 164, 165, and 166 are courses designed for skilled students to participate against each other to improve skills and understandings of advanced techniques, rules and regulations. Students in these classes may be permitted to participate in inter-collegiate student activities.

PED 167 HORSEBACK RIDING 1 (0-2-0)

A course designed to teach the fundamental skills in relation to riding horses. Included in the course will be riding (English and Western), cleaning, feeding, and stabling the horse.

PED 168 TOUCH FOOTBALL 1 (0-2-0)

A course designed to teach the basic fundamental skills of touch football. Emphasis is placed upon rules, safety, skill and conditioning.

PED 169 GYMNASTICS 1 (0-2-0)

A course designed to teach basic tumbling, floor exercise, conditioning, safety, and trampoline maneuvers.

PED 170 SKIING 1 (0-3-0)

A course designed to give information concerning safety in skiing, equipment, clothing, and techniques of skiing used on the slopes.

PED 171 INTERMEDIATE GOLF 1 (0-2-0)

A course designed to teach intermediate golf skills to the student. Emphasis is based on the non-beginner skills.

PED 172 BEGINNING KARATE 1 (0-2-0)

A course designed to teach basic self-defense. Included are blocks, counter punches, and proper kicking techniques. Also stressed are mental and physical conditioning related to the martial art of Tae Kwan Do Karate.

PED 173 INTERMEDIATE KARATE 1 (0-2-0)

A course designed for the Karate enthusiast who desires a more complete knowledge of self-defense, punching and kicking techniques. The use of Karate forms (Cata) to help develop mental and physical attributes needed for the Karate enthusiast.

PED 174 INTERMEDIATE GYMNASTICS 1 (0-2-0)

A course designed to allow students who have completed the basic gymnastic course to further their degree of proficiency in gymnastics. Intermediate Gymnastics exercises include more partner stunts, trampoline routines, and the teamwork involved in preparing and giving a gymnastic exhibition.

PED 175 INTERMEDIATE TENNIS 1 (0-2-0)

A course designed to teach strategy and execution of successful skills used in a tennis match. Emphasis is placed on execution at forehand, backhand, serve, volley, and doubles play and strategy.

PED 177 INTERMEDIATE SKIING 1 (0-2-0)

A course designed for those who desire to attain a higher degree of skiing proficiency. Emphasis is placed on actual skiing techniques with a more appreciable knowledge of equipment, clothing, and conditioning needed for skiing.

PED 178 COMPETITIVE BASKETBALL 1 (0-2-0)

A course designed to teach all aspects of the competitiveness of basketball. Emphasis is placed on team play and the intramural aspects of the game of basketball.

PED 179 SWIMMING 1 (0-2-0)

A course designed to teach and improve basic swimming strokes, water safety, diving, and to promote general fitness.

PED 180 WRESTLING 1 (0-2-0)

A course designed to teach the fundamental skills of beginning wrestling. Emphasis is placed on skills related to freestyle and collegiate wrestling as well as rules and regulations.

PED 181 TETHERBALL 1 (0-2-0)

A course designed to teach the basic fundamentals of exercise, eye-hand contact, and conditioning in relation to tetherball.

PED 182 INTRODUCTION TO LIFETIME SPORTS 1 (0-2-0)

A course designed to teach activities which are available to all individuals in their lifetime. A brief introduction to the following leisure time sports: bowling, golf, tennis, billiards, archery, badminton, and physical fitness.

PED 251 INTRODUCTION TO PHYSICAL EDUCATION 3 (3-0-0)

An introduction to the historical, philosophical, and scientific development of physical education as related to general education.

PHYSICS

PHY 151 ASTRONOMY I 5 (4-2-0)

An introduction to the basic concepts of solar system astronomy. The course will include a study of: history of astronomy, astronomical measurements, astronomical instruments, sun, earth-moon system, planets, asteroids, comets, meteors, and constellations.

PHY 152 ASTRONOMY II 5 (4-2-0)

An introduction to the basic concepts of stellar and galactic astronomy. The course will include a study of astronomical measurements, astronomical instruments, stars, nebulas, interstellar matter, galaxies, radio astronomy, quasars, pulsars, black holes, and cosmology.

PHY 271 GENERAL PHYSICS I 4 (3-3-0)

This is the first quarter of a three quarter sequence of study in the basic principles of physics. This quarter covers the fundamental concepts of the nature of physics and classical mechanics. The basic topics included are measurement, general properties of matter, vector analysis, kinematics, dynamics, statics, and the conservation of momentum and energy.

PHY 272 GENERAL PHYSICS II 4 (3-3-0)

This is the second quarter of General Physics. This quarter covers the fundamental concepts of non-linear motion, heat energy, and electricity. The basic topics included are rotation, vibration, wave motion, fluids, thermal expansion, heat transfer, thermodynamics, electrostatics and current electricity. Prerequisite: PHY 271.

PHY 273 GENERAL PHYSICS III 4 (3-3-0)

This is the final quarter of General Physics. This quarter covers the fundamental concepts of electromagnetism, light, and modern physics. The basic topics included are magnetism, electromagnetic induction, geometrical and physical optics, atomic and nuclear physics, relativity and quantum mechanics. Prerequisite: PHY 272.

PHY 1101 APPLIED SCIENCE I 4 (3-2-0)

An introduction to physical principles and their application in industry. Topics include measurement; properties of solids, liquids, and gasses; basic electrical principles.

PHY 1102 APPLIED SCIENCE II 4 (3-2-0)

A continuation of PHY 1101. Topics include heat, thermometry, principles of force, motion, work, energy and power. Prerequisite: PHY 1101.

PHY 1103 APPLIED SCIENCE III: LIGHT AND SOUND 4 (3-2-0)

A study of wave motion and sound and light. Practical applications are stressed through the study of acoustics, musical sounds, color mixing, optical devices, illumination and the laser. Prerequisite: PHY 1102.

POLITICAL SCIENCE

POL 251 AMERICAN NATIONAL GOVERNMENT 5 (5-0-0)

A survey course covering the organization and role of the Executive, Legislative and Judicial branches of the Federal Government, emphasizing such areas as business, national security, civil rights, the relationship between the American people and their political institutions, the electoral process, interest groups, and the international commitments of the United States.

POL 261 STATE AND LOCAL GOVERNMENT 5 (5-0-0)

A study of the organization, functions and powers of state, county, and local governments in the United States, with emphasis on the state of North Carolina.

POL 271 INTERNATIONAL RELATIONS 3 (3-0-0)

A study of basic forces underlying the conduct of international relations and the formation of foreign policy, with emphasis on the role of the United States in its relations with major areas of the world today.

POL 272 COMPARATIVE GOVERNMENT 3 (3-0-0)

An intensive study of the political structure of various nations, including some nations from Asia, Europe, Africa, Latin America, as well as the United States.

POL 274 CONSTITUTIONAL LAW 3 (3-0-0)

A study of the development of American Constitutional Law chiefly through judicial opinion, with emphasis on freedom of speech, rights of persons accused of crime, civil liberties, and separation of church and state.

POWER MECHANICS

PME 1001 INTERNAL COMBUSTION ENGINE 7 (3-0-12)

The course is an introduction to the construction and operation of internal combustion engines. Testing of engine performance, servicing and maintenance of pistons, valves, camshafts, lifters and crankshafts, fuel and exhaust systems, cooling systems, proper lubrication, methods of testing, measuring, diagnosing, and repairing will be studied. The student will develop an ability to read and interpret blueprints, charts, instruction and service manuals. Safety habits and proper use of tools and equipment will be emphasized. Prerequisite: None.

PME 1002 ENGINE ELECTRICAL AND FUEL SYSTEMS 7 (3-0-12)

The course will involve a thorough study of the electrical and fuel systems of the automobile. Battery mechanisms, generator and regulators, ignitions, accessories, lighting and wiring, fuel and electrical systems. Interpretation and reading of schematic prints and wiring diagrams will also be presented. Prerequisite: None.

PME 1003 BRAKES, CHASSIS, SUSPENSION SYSTEMS AND AUTOMOTIVE AIR CONDITIONING 7 (3-0-12)

The course will include a complete study of various braking systems employed on automobiles and light trucks, components of automotive chassis, suspension systems, principals of refrigeration, test equipment, and schematic prints and diagrams. Prerequisite: None.

PME 1004 AUTOMOTIVE POWER TRAIN SYSTEMS 7 (3-0-12)

The course will include principles and functions of automotive power train systems, clutches, automatic and manual transmissions, torque converters, drive shaft assemblies, rear axles and differentials. Prerequisite: None.

PME 1101 INTERNAL COMBUSTION ENGINE 8 (3-0-15)

Development of a thorough knowledge and ability in using, maintaining, and storing the various hand tools and measuring devices needed in engine repair work. Study of the construction and operation of components of internal combustion engines. Testing of engine performance; servicing and maintenance of pistons, valves, cams and camshafts, fuel and exhaust systems, cooling systems; proper lubrication; and methods of diagnosing and repairing. Development of ability to read and interpret blueprints, charts, instruction and service manuals, and wiring diagrams. Prerequisite: None.

PME 1102 ENGINE ELECTRICAL AND FUEL SYSTEMS 8 (3-0-15)

A thorough study of the electrical and fuel systems of the automobile. Battery cranking mechanism, generator, ignition, accessories and wiring; fuel pumps, carburetors, and fuel injectors. Characteristics of fuels, types of fuel systems, special tools, and testing equipment for the fuel and electrical system. Interpretation and reading of schematic prints and diagrams. Making sketches of electrical wiring and fuel system components for automotive engines and other internal combustion engines. Prerequisite: PME 1101.

PME 1121 FRONT SUSPENSION, ALIGNMENT, AND POWER STEERING 2 (1-0-3)

Theory of operation, correct disassembly and mounting of all front suspension parts on various types of frames (car and light truck). A thorough understanding of the function and repair of steering gears (Power and standard), shock absorbers, springs, wheels and tires, pumps, rams, etc. is gained. Theory and application of steering geometry, correct diagnosis of problems and use of the alignment and balancing machines; analysis and correction of tire wearing problems, vibrations, hard steering, pulling, etc. is experienced. Prerequisite: PME 1123.

PME 1123 BRAKES, CHASSIS, AND SUSPENSION SYSTEMS 8 (3-0-15)

A complete study of various braking systems employed on automobiles and light weight trucks. Emphasis is placed on how they operate, proper adjustment and repair. Also, the servicing of parking brakes is emphasized. Principles and functions of the components of automotive chassis is covered. Practical job instruction in adjusting and repairing of suspension systems. Interpretation of prints, schematics and diagrams pertaining to automotive chassis and braking systems. Prerequisite: None.

PME 1124 AUTOMOTIVE POWER TRAIN SYSTEMS 7 (3-0-12)

Principles and functions of automotive power train systems: clutches, transmission gears, torque converters, drive shaft assemblies, rear axles and differentials. Identification of troubles, servicing and repair. Prerequisite: PME 1123.

PME 1125 AUTO SERVICING 6 (3-0-9)

Emphasis is on the shop procedures necessary in "troubleshooting" of automotive systems, provides a full range of experiences in testing, adjusting, repairing and replacing components. A close simulation to an actual automotive shop situation will be maintained. Prerequisite: PME 1102, PME 1123, AHR 1101.

PME 1202 AUTO ELECTRICAL / ELECTRONICS 7 (4-0-6)

A thorough study of the theory and operation of various automobile electrical units and systems. Maintenance and testing procedures, diagnosis and repair of all types of electrical/electronic components, especially the transistor circuits, found on the modern automobile. Prerequisite: PME 1102.

PME 1203 AUTOMOTIVE ENGINE TUNE-UP 7 (4-0-9)

This course is designed to provide depth in the understanding and use of various types of tune-up equipment. Emphasis is placed on gaining knowledge of the waveforms of the oscilloscope and other units on the Tune-Up Tester. Through proper use of tune-up equipment, the student is expected to demonstrate his ability to diagnose malfunctions in ignition systems, cranking motors and charging circuits. Prerequisite: PME 1102, DFT 1102.

PME 1214 ADVANCED AIR CONDITIONING REPAIR 2 (3-0-2)

In-depth study of the principles of refrigeration; extensive practice in disassembly and the assembly of the component parts; diagnosis of malfunctioning; the proper methods of repair and handling of refrigerants in charging the various systems. Prerequisite: AHR 1101 or other work experience.

PME 1224 ADVANCED AUTOMATIC TRANSMISSIONS 7 (3-0-12)

This course is designed to provide a measure of depth in the understanding of automatic transmissions. Instruction includes classroom study, demonstrations, and student participation in disassembly, reassembly, and testing of selected transmissions. Special emphasis is placed on principles, function, construction, operation, servicing and "troubleshooting" procedures and repair of various types of automatic transmissions. Prerequisite: PME 1124.

PME 1226 AUTOMOBILE SERVICING II 5 (2-0-9)

Emphasis is placed on "troubleshooting" and repairing the various component systems on vehicles provided for general repairs. The student is given in-depth experiences in diagnosis, testing, adjusting, repairing, and replacing component parts. Prerequisite: PME 1125.

PRACTICAL NURSE

NUR 1101 BASIC SCIENCE 6 (4-4-0)

Development of understanding of human anatomical structures, physiological processes and their relation to each other through lecture and laboratory practice. Brief study of microbiology – the identification, growth, environment and control of microorganisms. The principle of good nutrition and their application to the needs of normal individuals including some modifications necessary in diet therapy.

NUR 1102 FUNDAMENTALS OF NURSING 8 (6-0-6)

An introduction to the basic principles underlying effective and safe nursing care. Body mechanics for nurse and patient. Sterilization and disinfection methods, use of hospital equipment, and techniques of daily hygenic patient care. Laboratory practice includes beginning skills and hygenic care of the dependent patient.

NUR 1103 MEDICAL – SURGICAL NURSING I 4 (4-0-0)

An introduction to the causes of illness and the body's reaction to the invasion of disease producing organisms and trauma. Process of illness, diagnostic tests, physiologic reaction to pain, needs of patients with long term illnesses, rehabilitation, pre-operative and post-operative needs, anesthesia agents, and modification of diet for disease condition. Prerequisite: NUR 1101, 1102, PSY 1102, RDG 1101.

NUR 1104 INTRODUCTION TO PHARMACOLOGY 2 (2-0-0)

A study of safe techniques for oral drug administration. Knowledge of drug sources, methods of preparation and storage. Also gain knowledge of equipment, skill in use of sterile technique used in preparation and giving unjectable medication. Classification of drugs by use and content. Review of adding, subtracting, multiplying fractions and decimals. Systems for measuring drugs. Solving problems of measurement, conversion with systems and from system to system. Legal aspects of medication preparation. Prerequisites: NUR 1101, 1102, PSY 1102, RDG 1101.

NUR 1105 MATERNAL CHILD CARE 6 (6-0-0)

Presentation of modern aspects of maternity nursing. The nursing care of the normal obstetrical patient and new born child. Detailed nursing care of patients during antipartum labor and postpartum periods. Emphasis on provision of better and safer nursing care for expectant mother and her baby. Prerequisites: NUR 1101, 1102, PSY 1102, RDG 1101.

NUR 1106 NURSING CARE OF CHILDREN 6 (6-0-0)

Comparison of normal growth and development patterns of the newborn, school-age child and adolescent. Physical differences in the child and adult. The effects of and nursing needs arising from hospitalization for a common or acute illness. Prerequisites: NUR 1101, 1102, PSY 1102, RDG 1101.

NUR 1107 CLINICAL EXPERIENCE I 5 (0-0-16)

Actual nursing care experiences with selected patients in the affiliating agencies correlated with classroom theory. Practice of simple hand skills and solving of simple nursing care problems. Beginning experience in making observations, using testing materials and instruments. Experience in planning meetings and charting some simple needs of hospitalized patients. Opportunities to begin development of attitudes and skills necessary for successful practical nursing career. Prerequisites: NUR 1101, 1102, PSY 1102, RDG 1101.

Nursing

NUR 1108 MEDICAL SURGICAL II 9 (9-0-0)
Continuation of NUR 1103 providing principles and concept of simple and complex rehabilitative nursing. Providing the student with opportunity to develop additional knowledge and skill necessary to meet the needs of the more dependent patient. Prerequisites: NUR 1103, 1104, 1105, 1106, 1107.

NUR 1109 PHARMACOLOGY AND DRUG THERAPY 3 (3-0-0)
Built upon NUR 1104 includes the main effects, uses and toxic symptoms of more common drug classifications. Insulin therapy, dosage problem, storage and preparation of narcotics with safety precautions are stressed. Prerequisites: NUR 1103, 1104, 1105, 1106, 1107.

NUR 1110 CLINICAL EXPERIENCE II 8 (0-0-24)
Nursing care experiences with selected patients correlated with classroom theory. Experiences are provided to enable the student to meet the needs of the more dependent patient in the medical, surgical, obstetrical, and pediatric departments. Prerequisites: NUR 1103, 1104, 1105, 1106, 1107.

NUR 1111 MEDICAL SURGICAL NURSING III 7 (7-0-0)
A continuation of NUR 1103 and 1107 presenting selected experience in the nursing care of patients with various disorders including care of the more critical or seriously ill, developing further the role of the LPN as an assistant to the RN. Also, included is the role in disaster or emergency nursing. Prerequisites: NUR 1108, 1109, 1110.

NUR 1112 VOCATIONAL ADJUSTMENTS 2 (2-0-0)
A study of the legal and ethical responsibilities of the LPN. Discussions are centered around opportunities for employment and the obligations assumed upon employment. North Carolina nursing law and professional organizations are discussed. Prerequisites: NUR 1108, 1109, 1110.

NUR 1113 CLINICAL EXPERIENCE III 8 (0-0-24)
Continued experience with adults in medical-surgical nursing, pediatric nursing or obstetrical nursing under supervision of clinical teachers. Experience in more complicated nursing treatments. Emphasis is placed on the assistant role and includes experience in administration of medications under direct supervision of clinical instructor. Prerequisites: NUR 1108, 1109, 1110.

PRINTING

PRN 1001 OFFSET FUNDAMENTALS 7 (3-0-12)
This course introduces to the student the study of offset lithography through hands-on experience involving operation of basic equipment used in the printing profession. Feeding, register, delivery, inking and dampening systems are some of the activities included to acquaint students with the practical knowledge of printing.

PRN 1002 BASIC LAYOUT 7 (3-0-12)
Basic layout involves the study of design principles used by the printing industry. Instruction of basic layout design includes thumbnail sketches, rough layout, comprehensive layout, copy fitting, computing enlargements and reductions, multipage layout and mechanical layout.

PRN 1003 GRAPHIC ARTS TECHNOLOGY 7 (3-0-12)
A study of the technology of graphic arts with information ranging from the history of graphics towards modern printing processes. Included in this course is the study of job descriptions and terminology used in the printing industry.

PRN 1004 PRINTING PRODUCTION TECHNOLOGY 7 (3-0-12)
This course is designed to acquaint students with the technical processes used in printing production. The study will include the following: organizing a flow chart for printing production, purchasing equipment and supplies, troubleshooting and maintenance of equipment.

PRN 1111 PRINTING PROCESSES 4 (2-0-6)
A study of a variety of printing plates and processes with emphasis on identification, application, and evaluation. Specific processes will include lithography, letterpress, and silk screen. Instruction will include demonstrations with hand cut and photosensitive films in producing copy by the screen processes, design, typestyles and audiovisuals, and an orientation to composition.

PRN 1112 OFFSET PLATEMAKING AND PRINTING MEASUREMENTS 4 (2-0-6)

The four different categories of lithographic plates, direct image, deep etch, bimetal and surface plate, and how they are prepared are studied. The procedures for preparing presensitized plates are detailed along with correction of common plate problems.

PRN 1113 PHOTO TECHNOLOGY I 4 (2-0-6)

This course is designed to include the theory and practice of preparing line and halftone negatives and positives for offset lithography. Camera settings, lens settings will be covered, an integral part of darkroom procedure. Negative handling, stripping, making flats, and exposing presensitized plates will be taught as a part of the photo-mechanical process.

PRN 1114 PHOTO TECHNOLOGY II 4 (2-0-6)

Advanced procedures for handling photosensitive materials are studied and applied for use in photo-offset lithography.

PRN 1115 PHOTO TECHNOLOGY III 4 (2-0-6)

Further study into the use of photosensitive materials as it may be applied towards other printing processes. Advanced methods such as making duotones, posterization and other graphic control processes will be included in the study.

PRN 1124 BINDERY OPERATIONS 4 (2-0-6)

This course is designed to present the equipment and materials used in the bindery operation used for offset press productions. Collating, padding, drilling, cutting, folding, stitching, and other bindery operations will be covered.

PRN 1126 OFFSET PRESSWORK I 4 (2-0-6)

An in-depth study into the practice of operating offset printing presses. Instruction will include inking and water systems, registration, feed and delivery systems, roller and blanket care, and basic troubleshooting. Paper weights and measurements will be introduced as an integral part of press operation as well as OSHA and mechanics safety standards, including use of metric and other tools.

PRN 1127 OFFSET PRESSWORK II 6 (3-0-9)

Further study in procedures of working with an offset press with project-oriented objectives.

PRN 1128 OFFSET PRESSWORK III 5 (2-0-9)

A continuation of PRN 1127. Prerequisite: PRN 1126.

PRN 1129 OFFSET PRESSWORK IV 2 (0-0-6)

This course is designed to provide the student with advanced knowledge acquired in photography to the operation of the offset press. The student continues his practice and improves techniques.

PRN 1130 OFFSET PRESSWORK V 2 (0-0-6)

Advanced instruction into use of offset work for multicolor printing with emphasis on registration techniques.

PRN 1131 OFFSET PRESSWORK VI 2 (0-0-6)

A continuation of PRN 1130. Prerequisite: PRN 1130.

PRN 1133 BASIC COMPOSITION 4 (2-0-6)

This course covers an orientation to composition and includes basic layout, progressive steps of layout, preparing a paste-up, paste-up using overlays, scaling and cropping. Measurements are emphasized throughout the course.

PRN 1134 COMPOSITION 4 (2-0-6)

A continuation of PRN 1133. Prerequisite: PRN 1133.

PRN 1136 PRODUCTION PRINTING 6 (3-0-9)

This course is designed to combine all the previous training into a shop operation. The student will perform all activities in the production of finished jobs; including costing, routing, preparation presswork, and shipping. In addition, letterpress printing will be covered with no setting required.

PRN 1140 CREATIVE ART AND PHOTOGRAPHY 4 (2-0-6)

This course is designed to afford the student the opportunity to start with an idea and develop it into a graphic. Emphasis is placed upon knowledge acquired in other courses and the application of this knowledge in class projects. Emphasis is on the creative aspects of graphic arts.

PRN 1141 PRINTING LAYOUT AND TYPE STYLES 5 (2-0-9)

This course is designed to utilize the culmination of information learned in the area of printing letters and numbers in different styles. The student is afforded the opportunity of putting all his acquired knowledge together in printed graphic form. Emphasis is on the mechanical aspects of graphics.

PSYCHOLOGY

PSY 151 INTRODUCTION TO PSYCHOLOGY 5 (5-0-0)

A study of general psychology as a behavioral science. The course introduces the students to such areas as the history and systems of psychology, sensation, perceptions, learning, emotions, motivation, conditioning, personality, abnormal behavior, development (physical and mental), and social interaction with other people and society.

PSY 201 APPLIED PSYCHOLOGY IN HUMAN RELATIONS 3 (3-0-0)

A study of a theory of the interaction process. The course will focus on the development of skills of interaction which facilitate self-understanding on the client's part and a productive relationship between student and his client. These skills will be appropriate for crisis intervention. There will be opportunities to practice these skills through role playing.

PSY 203 ADOLESCENT PSYCHOLOGY 3 (3-0-0)

A study of the nature and source of the problems of adolescents in western culture; physical, emotional, social, intellectual, and personality development of adolescents.

PSY 229 ABNORMAL PSYCHOLOGY 3 (3-0-0)

A study of the symptoms, contributing factors, treatment and outcomes of the mentally ill and mentally defective as well as maladjusted, antisocial persons. Classifications and nomenclature of psychoneurosis, psychoses, and other illnesses are discussed.

PSY 251 HUMAN POTENTIAL SEMINARS 3 (3-0-0)

Through small group processes and readings in the field of group procedures, the student learns the processes of various types of groups (T-groups, Encounter Groups, Transactional analysis, The Carkhuff Model of Helping Relations), and discovers their own potentialities as a person, as well as learning how to effectively relate to other persons in a group. Emphasis is on both the cognitive learning of various models of group process, and the affective learning related to the actualization of human potential, interpersonal relationships, and personal growth.

PSY 261 EDUCATIONAL PSYCHOLOGY 5 (5-0-0)

A study of the basic principles of psychology with emphasis on the effects of development on behavior, nature of learning, teaching relationships, individual differences, social psychology, mental health and other psychological areas that concern the teacher. Includes studies of major theories of education, contemporary issues in education, and involves some practical experience in local schools. Prerequisite: PSY 151 or permission of instructor.

PSY 1101 HUMAN RELATIONS 3 (3-0-0)

Development of understanding of relationships to other persons through some of the basic principles of human psychology. Study of the problems of the individual and his work situation in relation to society, group membership, and relationships within the work situation.

PSY 1102 INTERPERSONAL RELATIONS IN NURSING 3 (3-0-0)

Development of understanding of relationships to other persons, especially health workers and patients, through discussions of the challenges and responsibilities of the health worker; importance of individual worth and self-understanding; basic principles of human behavior; physical and emotional needs; effects of illness on behavior and ways health workers might cope with this behavior; and the importance of verbal and nonverbal communications.

READING

RDG 101 READING 3 (3-0-0)

Designed for the technical student who can benefit from reading instruction, this course provides an individualized framework that allows the student to concentrate on his own particular weaknesses and to progress at his own rate. Major objectives are to improve word attack skills, vocabulary, comprehension, and reading rate, through the use of multi-media materials.

RDG 151 READING 3 (3-0-0)

Designed for the student who can benefit from reading instruction, this course will emphasize improvement of reading rate, comprehension, and vocabulary. Instruction will be completely individualized, with multi-media materials utilized.

RDG 152 SPEED READING (NON-CREDIT) 0 (3-0-0)

Designed for the able reader whose goal is to improve his rate and comprehension. Through a multi-media, individualized approach, the student will develop a faster, more efficient reading rate, in both inclusive and selective reading. The student will also aim to improve his flexibility in the act of reading.

RDG 1101 VOCATIONAL READING IMPROVEMENTS 3 (3-0-0)

Designed for the vocational student, this course provides an individualized framework that allows the student to concentrate on his own particular weaknesses and to progress at his own rate. Major objectives are to improve word attack skills, vocabulary, comprehension, and reading rate, through the use of multi-media materials. Required of all vocational students.

RELIGION

REL 151 INTRODUCTION TO THE OLD TESTAMENT 3 (3-0-0)

This course is intended to be a survey of the Old Testament touching on the principle themes such as creation, the entrance of sin into human life, and redemption. The course will also involve an historical survey relating the Biblical literature to the surrounding cultures that affected the life of Israel. The student should emerge from the course with a better understanding of the Biblical literature of the Old Testament.

REL 152 INTRODUCTION TO THE NEW TESTAMENT 3 (3-0-0)

This course will be an introduction to the New Testament material through a study of the Gospels, Acts, and selected materials from the Epistles of the New Testament. It is recommended that the student should take the Old Testament introduction the first quarter in preparation for this second quarter. This is a suggestion and not a prerequisite. The student should emerge from this introduction to the New Testament with a deeper understanding of the Christian faith which is important to the understanding of our contemporary culture.

REL 153 THE RELIGIONS OF MAN 3 (3-0-0)

This course surveys the religions of man, beginning with the early primitive religion of prehistoric man, and ending with contemporary developments in Eastern and Western Religion. Special emphasis is given to Hinduism, Buddhism, Zen, Taoism, Confucianism, Judaism, Christianity, and Islam. The purpose of this course is to enable the student to appreciate the faith of other men, and to become aware of major spiritual forces in the world today.

SOCIOLOGY

SOC 101 COMMUNITY INVOLVEMENT 5 (5-0-0)

This course is designed to give the students a better understanding of the community and the changes taking place in community living. A close look at several major problems faced by all citizens in their efforts to raise levels of living will be made. Special emphasis will be given to successful action programs which have been developed to solve many of the current community problems.

SOC 151 INTRODUCTION TO SOCIOLOGY 5 (5-0-0)

This course begins with the definition and classification of things which pertain to human interaction. Definition of words and concerns with sociological concepts make it a typical introductory course. The scope of the course is wide enough so that most sociological problems are briefly mentioned.

SOC 261 COURTSHIP, MARRIAGE, AND THE FAMILY 5 (5-0-0)

This course first deals with the nature of self which is preparatory for a discussion of courtship. The emotional and down-to-earth problems of marriage are examined in considerable detail. Such problems as marital adjustment, divorces, re-marriages, careers and marriage, and in-laws are considered. The developing family is traced, and the necessity for maturity before marriage is considered. Prerequisite: SOC 151 or permission of the instructor.

SOC 271 SOCIAL PROBLEMS 3 (3-0-0)

This course will deal with the major social problems of our present day. Crime, poverty, mental retardation, and welfare cases constitute examples of problems to be studied. Prerequisite: SOC 151.

SPANISH

SPA 151 ELEMENTARY SPANISH I 5 (5-0-0)

A beginning course designed for those who have had no Spanish. The course includes much oral work, drill in grammatical principles, composition, conversation, dictation, pronunciation, and reading. SPA 151 and 152 are equivalent to two years of high school Spanish. Senior colleges that require two years of foreign language for admission accept these courses for entrance credit or six hours elective credit. Prerequisite: None.

SPA 152 ELEMENTARY SPANISH II 5 (5-0-0)

A continuation of SPA 151. Prerequisite: SPA 151.

SPA 251 INTERMEDIATE SPANISH I 5 (5-0-0)

This course consists of a review of grammatical principles, composition, conversation, dictation, and reading. First-hand knowledge of Spanish and Hispanic America is encouraged through publications. Prerequisite: Two years of high school Spanish or SPA 152.

SPA 252 INTERMEDIATE SPANISH II 5 (5-0-0)

A continuation of SPA 251. Prerequisite: SPA 251.

SPA 261 SPANISH LITERATURE I 5 (5-0-0)

A survey of selected literature from the Middle Ages through the 18th Century. Prerequisite: SPA 252.

SPA 262 SPANISH LITERATURE II 5 (5-0-0)

A survey of selected literature from the 19th and the 20th Centuries. Prerequisite: SPA 261.

SPEECH

SPH 251 PUBLIC SPEAKING 3 (3-0-0)

A basic course in public speaking designed to give the student the poise and confidence necessary for thinking and speaking freely before an audience. Set goals in preparation and delivery of different types of speeches will be met largely by means of practice with guidance.

SPH 252 VOICE AND DICTION 3 (3-0-0)

Practical applications of the student's knowledge of the principles of public speaking, progressing to the more complex speaking situation. More emphasis is placed on written critiques and listening aids. Suggested for students planning to major in Education, Liberal Arts, and supporting fields. Prerequisite: SPH 251.

WELDING

WLD 1001 OXYACETYLENE WELDING AND CUTTING – S 7 (3-0-12)

Introduction to the history of oxacetylene welding; the principles of welding; and cutting nomenclature of the equipment, assembly of units. Welding procedures, such as practice of puddling and carrying the puddle, running flat beads, butt welding in the flat, vertical and overhead position, brazing, hard and soft soldering, safety procedures in the use of tools and equipment. Students perform mechanical testing and inspection to determine quality of the welds.

WLD 1002 ARC WELDING – S 7 (3-0-12)

The operation of AC transformers and DC motor generator arc welding sets. Studies of welding heats, polarities, and electrodes for use in joining various metal alloys by the arc welding process. Beads, butt and fillet welds in all positions are made and tested in order that the student may detect his weaknesses in welding. Safety procedures in the use of tools and equipment.

WLD 1003 PIPE WELDING – S 7 (3-0-12)

Practice in the welding of pressure piping in the horizontal, vertical, and horizontal fixed position using shielded metal arc welding processes according to Section VIII and IX of the USMSicods. Prerequisite: WLD 1002 or approval of instructor.

WLD 1004 COMMERCIAL AND INDUSTRIAL PRACTICES – S 7 (3-0-12)

Practice in simulated industrial processes and techniques; sketching and laying out a paper the size and shape of description; listing the procedure steps necessary to build the product; following these directions to build the product. A study of maintenance, repairing worn or broken parts by special welding applications, field welding and nondestructive tests and inspections. Prerequisite: WLD 1001, 1002 or approval of instructor.

WLD 1101 BASIC GAS WELDING 2 (1-0-3)

Welding demonstrations by the instructor and practice by students in the welding shop. Safe and correct methods of assembling and operating the welding equipment. Practice will be given for surface welding, bronze welding, silver soldering, and flame-cutting methods applicable to mechanical repair work. Prerequisite: None.

WLD 1104 BASIC WELDING AND CUTTING 6 (4-0-6)

Welding demonstrations by the instructor and practice by students in the welding shop. Safe and correct methods of assembling and operating the welding equipment. Practice will be given for surface welding; bronze welding, silver soldering, arc and gas-arc welding methods applicable to mechanical repair work.

WLD 1105 AUTO BODY WELDING 1 (0-0-3)

Welding practices on material applicable to the installation of body panels and repairs to doors, fenders, hoods, and deck lids. Student runs beads, does butt and fillet welding. Performs tests to detect strength and weaknesses of welded joints. Safety procedures are emphasized throughout the course. Prerequisite: WLD 1101.

WLD 1112 MECHANICAL TESTING AND INSPECTION 2 (1-0-3)

The standard methods for mechanical testing of welds. Introduction to the various types of tests and testing procedures. Types of tests to be covered are: bend, destructive, free-bend, guided-bend, nick-tear, notched-bend, tee-bend, nondestructive, V-notch, Charpy impact. Prerequisite: WLD 1120, 1121.

WLD 1120 OXYACETYLENE WELDING AND CUTTING 10 (5-0-15)

Introduction to the history of oxacetylene welding; the principles of welding; and cutting nomenclature of the equipment, assembly of units. Welding procedures, such as practice of puddling and carrying the puddle, running flat beads, butt welding in the flat, vertical and overhead position, brazing, hard and soft soldering, safety procedures in the use of tools and equipment. Students perform mechanical testing and inspection to determine quality of the welds.

WLD 1121 ARC WELDING 10 (3-0-21)

The operation of AC transformers and DC motor generator arc welding sets. Studies of welding heats, polarities, and electrodes for use in joining various metal alloys by the arc welding process. Beads, butt and fillet welds in all positions are made and tested in order that the student may detect his weaknesses in welding. Safety procedures in the use of tools and equipment.

WLD 1122 COMMERCIAL AND INDUSTRIAL PRACTICES 8 (3-0-15)

Practice in simulated industrial processes and techniques; sketching and laying out a paper the size and shape of description; listing the procedure steps necessary to build the product; following these directions to build the product. A study of maintenance, repairing worn or broken parts by special welding applications, field welding and nondestructive tests and inspections. Prerequisite: WLD 1120, 1121.

WLD 1123 INERT GAS WELDING 2 (1-0-3)

Introduction and practical operations in the use of inert gas shield arc welding. A study of the equipment, operation, safety and practice in the various positions. A thorough study of topics such as principles of operation, shielding gases, filler rods, process variations and applications, manual and automatic welding. Prerequisite: WLD 1120, 1121.

WLD 1124 PIPE WELDING 9 (4-0-15)

Practice in the welding of pressure piping in the horizontal, vertical, and horizontal fixed position using shielded metal arc welding processes. Prerequisite: WLD 1121.

WLD 1125 CERTIFICATION PRACTICE 5 (3-0-6)

Practice in welding the various materials to meet certification standards. Use of various tests, including the guided bend and the tensile strength tests, to check the quality of work. Emphasis placed on attaining skill in producing quality welds. Prerequisite: WLD 1120, 1121, 1123, 1124.

WLD 1129 BASIC WELDING 3 (2-0-3)

Basic characteristics of metals, equipment, its construction and operation are presented by means of audio-visuals and other educational media. Welding demonstrations by the instructor and practice by students in the welding shop. Safe and correct methods of assembling and operating gas and arc welding equipment. Practice will be given in surface welding, bronze welding, silver soldering, and flame-cutting and arc welding methods applicable to mechanical repair work. Prerequisite: None.

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Up-Date for the

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CATALOG

PART II

1978-79

MITCHELL COMMUNITY COLLEGE
STATESVILLE, N. C. 28677

The 1980-81 Mitchell Community College Catalog, Part I has been published. Since corrections to Part II of the 1978-79 Catalog are minimal, these insert sheets have been prepared in lieu of printing a new book. Please update your copy of the 1978-79 Catalog, Part II by using these sheets.

Add to Air Conditioning and Refrigeration Course Descriptions, page 13.

AHR 1005 BASIC AIR CONDITIONING AND REFRIGERATION SERVICE AND MAINTENANCE — 7 (3-0-12)

This course will be a basic introduction to the principles of refrigeration and air conditioning which will include but not be limited to terminology, care and use of tools and equipment and the identification and function of component parts. Heavy emphasis will be placed on practical work experience in the labs.

AHR 1011 THEORY AND PRINCIPLES OF REFRIGERATION AND SERVICING — 12 (5-0-21)

An introduction to the principles of refrigeration — commercial and domestic, its terminology, the use and care of special tools and trade equipment, and the identification and the function of the component parts of a refrigeration system. Basic topics to be covered will be laws of refrigeration; characteristics and comparison of the different refrigerant gases; the use and construction of valves, fittings, and basic control devices. Installation, operation, and servicing of commercial display cabinets, walk-in coolers and freezer units, and mobile refrigeration units are studies. Extensive use of manufacturer catalogs, service bulletins, and operational instruction will be made. All pertinent safety rules and regulations will be studied and put into practice. Fundamentals of other related subjects will be included, i.e. math for load calculation; physics for properties of solids, liquids, and gases; blueprint reading to enable one to properly install a particular unit; and electricity to facilitate the use of test and control mechanisms.

AHR 1012 THEORY AND PRINCIPLES OF HEATING SYSTEMS AND SERVICING — 12 (5-0-21)

Work in this course will include all phases of heating units for winter environment control. Extensive time will be spent on the theory and principles of high pressure oil burners and gas-fired furnaces. Electric heat and solar heating systems will be studied and theories explained. Methods of heat transfer, storage, and districution will be included. Effects and control of humidity as a comfort factor will be dealt with at great length. Electricity and its control over other operations such as fans, transformers, relays, ignition units, and thermostats will be covered at length. This course will give the student the necessary skills to be able to perform basic installation, servicing, and trouble-shooting tasks on domestic, commercial, and industrial heating plants. Heat pumps are not included. They will be covered in AHR 1126.

AHR 1013 THEORY AND PRINCIPLES OF AIR CONDITIONING AND SERVICING — 12 (5-0-21)

Work includes the selection of various components and systems to accomplish heating with heat pumps, air conditioning, air movement, air cleaning and dehumidification. Basic air conditioning fundamentals and laws will be covered. Modern methods of installation, maintenance, and system analysis will be covered in detail. Use is made of the psychrometric charts in determining the needs and problems of specific location. Mollier diagrams are used to determine proper and improper

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operating condition of compressors and other system components. Domestic and commercial air conditioning systems are disassembled, repaired, and reassembled. Frequent use is made of live projects both on and off campus to enlighten the students as to the many varied used and applications of different systems. Auxiliary equipment is studied and worked on in the lab such as pumps, fan motors, cooling towers, and damper motors. Automotive air conditioning is discussed briefly and some shop practice is done on late models. An introduction to load calculation for air conditioning will also be included.

AHR 1023 AIR CONDITIONING AND REFRIGERATION SERVICE MAINTENANCE 12 (5-0-21)

This course is an introduction to the principles of refrigeration, terminology, the proper use and care of tools and equipment including the identification and function of system components. Other topics include basic laws of refrigeration, characteristics and construction of valves, fittings, and basic controls. Practical work is provided in tube bending, flaring and soldering as well as standard safety measures used in special refrigeration service equipment and handling of refrigerants. Students are acquainted with the basic fundamentals of installation, maintenance, and repair of machines through lab and demonstrations including use of measuring tools, leveling and accuracy. Layouts and sketches build on blueprint reading and math skills.

Add to Automotive Course Descriptions, page 17.

AUT 1011 AUTO BODY REPAIR AND BASIC THEORY 12 (5-0-21)

Presentation of basic principles of automobile construction, design, and manufacturing. An introduction to basic body repair hand tools and the safe use of these tools is provided. Simplified metal straightening and minor repairs are followed by practice in the use of power tools to straighten frames and panels. Basic welding skills in auto body repair are introduced and opportunities are provided to replace panels and fenders. The importance of effective fiber glass repair of automobiles is demonstrated and practice opportunities are provided in the lab.

AUT 1012 AUTO BODY REPAIR AND APPLICATIONS I 12 (5-0-21)

Instruction is provided in proper installation and alignment of hoods, deck lids, and doors as well as removing and replacing rear windows and windshields. Painting skills are introduced including preparation of a surface for paint, proper masking of a surface, painting materials and painting equipment. Correct techniques are introduced in spray painting with lacquer and acrylic enamel. Study of custom painting is introduced as is buffing and compounding as well as basics of estimating cost of repairs.

AUT 1013 AUTO BODY REPAIR AND APPLICATIONS II 12 (5-0-21)

Introduction of servicing techniques and new safety features is provided. Skills in metal introduced earlier are reviewed and expanded to include cutting sheet metal, shrinking of sheet metal, metal straightening and repairs II, panel replacement II, and welding. In addition, review of painting skills including paint matching and refinishing of enamel and lacquer II are provided. Instruction is provided in proper replacement and alignment of door glass, estimates II, and a general review of body shop applications including necessary electrical repairs expected as a part of auto body repair services.

Add to Carpentry Course Descriptions, page 22.

CAR 1011 FUNDAMENTALS OF CARPENTRY 12 (5-0-21)

This course is an introduction to the role of carpentry in the construction industry and present trends in carpentry. Lab experiences include proper use and care of carpenter's hand and power tools in cutting, shaping, and joining construction materials. Study will include properties of types of wood, common use, and basic site preparation for construction as well as development of skills in interpreting blueprints and specifications common to the building trades and review of the necessary computational skills.

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CAR 1012 CARPENTRY: ESTIMATING, FRAMING, AND FINISHING 12 (5-0-21)

Basic instruction is provided in principles and practices of proper framing techniques including foundation, floors, walls, and roofing. Instruction in finishing includes methods and materials for cornices, window and door trim, flooring, moldings, and hardware. Instruction in estimating will include quantities of materials needed, cost of alternative types of materials, and additional instruction in computational skills as well as blueprint interpretation. Elementary wood finishing will be included.

CAR 1013 CARPENTRY: MILLWORK AND CABINETMAKING 12 (5-0-21)

This course is an introduction to basic cabinetmaking and millwork as performed in general carpentry. Proper and safe use of shop tools is emphasized and practical design, layout, construction and finishing cabinets, built-ins as well as materials and finished interior trims. Instruction will continue in estimating and will provide information about coordination of carpentry activities with those of other contractors in a construction project as well as current building codes. Review of blueprint and computational skills are included.

Add to Chemistry Course Descriptions, page 23.

CHM 101 INTRODUCTION TO FORENSIC CHEMISTRY 5 (4-2-0)

This course is designed to help the student understand the role of the scientist and crime laboratory in the criminal justice system. The student will be introduced to the theories and techniques of the forensic scientist. The role of proper recognition, collection, and preservation of physical evidence has in criminal investigation also is emphasized.

CHM 102 AGRICULTURAL CHEMISTRY

CHM 103 INDUSTRIAL CHEMISTRY 5 (4-2-0)

Study of the physical and chemical properties of substances, chemical changes; elements, compounds, gases, chemical combinations; weights and measurements; theory of metals; acids, bases, salts, solvents, solutions, and emulsions. In addition, study of carbohydrates; electrochemistry, electrotypes, and electrolysis in their application of chemistry to industry.

Add to Electricity Course Descriptions, page 32.

ELC 1005 A/C, D/C MACHINES AND CONTROLS 7 (3-0-12)

This course will be a basic introduction of the electrical structure of matter and electron theory with a fundamental approach to the concept and analysis of A/C and D/C machines and single system controls by hands-on experiences in the lab.

ELC 1022 A/C, D/C MACHINES AND CONTROLS 12 (5-0-21)

Introduction to the basics of electrical structure of matter and electron theory, the relationship between voltage, current, and resistance in series, parallel, and series-parallel circuits. Direct current studies include circuits by Ohm's Law, Kirchoff's Law and the sources of direct current voltage potentials. Fundamental concepts of alternating current flow, reactance, impedance, phase angle, power and resonance as well as the analysis of alternating current circuits are introduced. Instruction in the use of electrical test instruments in power measurements, circuit analysis, testing transformers and motors is demonstrated and practiced as well as machine concepts and simple system controls including thermostats, timers, and sequencing switches. Instruction continues in math and blueprint skills necessary with emphasis on proper safety procedures.

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Add to Mechanics Course Descriptions, page 40.

MEC 1011 MACHINE SHOP THEORY AND PRACTICE I 12 (5-0-21)

Introduction to basics of the metal-working trade as it relates to machining operations. Instruction is provided for proper operation of lathes, drilling machines, metal cutting saws, milling machines, and bench grinders. Lecture, demonstrations and lab experiences include shop safety, basic hand tools, and shop measuring instruments. Concurrent instruction is provided in math, basic principles of blueprint reading, and industrial safety.

MEC 1012 MACHINE SHOP THEORY AND PRACTICE II 12 (5-0-21)

Properties of ferrous and non-ferrous metal are introduced as well as common shop terms used in treatment of metals. Instruction in the assembly of parts, fits, hand broaches, screw and tap extractors, set-up equipment, inspection tools, gauges, buffing and polishing, and surface grinders. Continuing instruction includes use of precision measuring tools, selection of speeds and feeds, proper use of saws, lathes, power drills, and milling machines as well as development of skills in math, blueprint reading, and shop safety.

MEC 1013 MACHINE SHOP THEORY AND PRACTICE III 12 (5-0-21)

Continuing instruction, demonstration, and lab experiences are provided in using precision measuring tools, milling machines and surface grinders. Practice in setting up and operating machine tools including the selection and use of work holding devices, feeds and speeds, special heads and tables, cutting tools and coolants will be provided through advanced projects. Necessary information and practice emphasize math skills, blueprint reading, and metal properties and treatment as well as introduction to oxyacetylene welding. Safety and shop practices are emphasized.

Add to Music Course Descriptions, page 41.

MUS 194 DICTION FOR SINGERS 3 (3-0-0)

A study of the International Phonetic Alphabet and its application to the pronunciation, transcription and singing of English, ecclesiastical Latin and Italian.

MUS 195 FRENCH DICTION FOR SINGERS 3 (3-0-0)

A study of the International Phonetic Alphabet as it relates to the French language and special problems involved in singing this language.

MUS 196 GERMAN DICTION FOR SINGERS 3 (3-0-0)

A study of the International Phonetic Alphabet as it relates to the German language and special problems involved in singing this language.

Add to Power Mechanics Course Descriptions, page 49.

PME 1011 INTERNAL COMBUSTION ENGINES AND RELATED SYSTEMS 12 (5-0-21)

Development of a thorough knowledge and ability in using, maintaining, and storing the various hand tools and measuring devices needed in engine repair work. Study of the construction and operation of components of internal combustion engines. Testing of engine performance; servicing cooling systems; proper lubrication; and methods of testing, diagnosing and repairing. Development of ability to read and interpret blueprints, charts, instruction and service manuals, and wiring diagrams.

PME 1012 ELECTRICAL, FUEL, AND POWER TRAIN SYSTEMS 12 (5-0-21)

A thorough study of the electrical and fuel systems of the automobile. Battery cranking mechanism, generator, accessories, and wiring; fuel pumps, carburators, and fuel injectors. Characteristics of fuels, types of fuel systems, special tools, and testing equipment for the fuel and electrical system. A complete study of the principles and functions of automotive power train systems; clutches, transmission gears, torque converters, drive shaft assemblies, rear axles and differentials. Also the identification of troubles, servicing, and repair.

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PME 1013 BRAKES, CHASSIS, SUSPENSION SYSTEMS AND AIR CONDITIONING, AUTOMOTIVE SERVICING 12 (5-0-21)

This course is a complete study of various braking systems employed on automobiles and light weight trucks. Emphasis is placed on how they operate, proper adjustment and repair. Also, the servicing of parking brakes is emphasized. Principles and functions of the components of automotive chassis. Practical job instruction in adjusting and repairing of suspension systems. This course includes a general introduction to the principles of refrigeration; study of the assembly of the components and connections necessary in the mechanisms, the methods of operation, and control; proper handling of refrigerants in charging the system. Use of test equipment in diagnosing trouble, conducting efficiency tests and general maintenance and repair work.

Add to Welding Course Descriptions, page 57.

WLD 1011 OXACETYLENE WELDING AND CUTTING 12 (5-0-21)

Introduction to the history and basic equipment necessary for proper oxacetylene welding includes principles, nomenclature, and assembly of the units. Development of oxacetylene welding skills is encouraged through instruction demonstrations and lab experiences. These skills and procedure include puddling and carrying the puddle, running flat beads, butt welding in the flat, verticle, and overhead positions, brazing, hard and soft procedures. Emphasis is placed upon blueprint reading skills, computational skills and safety procedures.

WLD 1012 ARC WELDING AND INERT GAS WELDING 12 (5-0-21)

Instruction is provided for the proper operation of AC transformers and DC motor generator arc welding sets, lecture, demonstrations, and lab exercises are included to teach welding heats, polarities, and electrodes for use in joining various metal alloys by the arc welding process. Beads, butt and fillet welds in various positions are made and tested to determine quality and improve performance. Introduction and practical operations in the use of inert gas shield welding used by area industries includes lecture, demonstrations and lab exercises. Expansion of concepts in blueprint reading include trade drawings, use of welding symbols, and specifications as well as geometric principles applied to shop operations.

WLD 1013 COMMERCIAL AND INDUSTRIAL PRACTICES 12 (5-0-21)

Practice is provided in simulated industrial processes and techniques. This practice includes demonstration in sketching, pattern making, procedure descriptions and construction of projects. Study will include repair work, tests and inspections of work to acquaint students with certification standards. Emphasis is placed on attaining skill in producing quality welds. Instruction continues in blueprint work, computational skills, and proper safety standards.

WLD 1021 MACHINE SHOP APPLICATION AND WELDING PRACTICES 12 (5-0-21)

An introduction to the metal working trade as it relates to machine operations includes shop orientation, shop safety, basic hand tools, and shop measuring instruments. Basic operations include engine lathe, drilling machines, metal cutting saws, milling machines, and bench grinders. Basic oxyacetylene and arc welding processes are introduced in lecture, demonstration, and lab exercises. Instruction is provided in safety, blueprint reading and math as part of the course.

A new Part II Catalog will be printed next year. If you do not have a Part II Catalog, you can get one by contacting Student Personnel Services, Mitchell Community College, West Broad St., Statesville, N. C. 28677.

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